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OCCUPATIONAL SURVEY REPORT



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ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT,
SPACE SYSTEMS COMMAND AND CONTROL OPERATOR/
TECHNICIAN CAREER LADDER,
AFSC's 30830, 30850, 30870, AND 30890.

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USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

△ This report presents a summary of the results of a detailed Air Force Electronics Principles survey of the Space Systems Command and Control Operator/Technician career ladder, AFSC's 30830, 30850, 30870, and 30890. △

The Electronics Principles Inventory (EPI) was developed by Major Thomas J. O'Connor and Mr. Hendrick W. Ruck and the survey data were analyzed by Mr. Ruck. Both are members of the Occupational Survey Branch, USAF Occupational Measurement Center, Lackland AFB, Texas.

Computer programs for analyzing the occupational data *are presented* were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Distribution of this report is made upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Lackland AFB, Texas 78236.

This report has been reviewed and is approved.

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ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT
SPACE SYSTEMS COMMAND AND CONTROL OPERATOR/TECHNICIAN CAREER LADDER
AFS 308X0

INTRODUCTION

This report summarizes the results of the first full-scale operational electronics principles survey of an Air Force electronics specialty. The survey was directed by HQ ATC/TT, Major General C. G. Cleveland, in a letter dated 11 February 1975. In that letter General Cleveland asked the USAF Occupational Measurement Center to review the use of electronics training by personnel on the job. The Space Systems Command and Control specialty (AFS 308X0) was selected to be surveyed after consultation with HQ ATC personnel.

This report presents a brief summary of (a) the development of the Electronics Principles Inventory (EPI) which was used to collect the data, (b) the administration of the EPI to AFS 308X0 job incumbents, and (c) the data resulting from the survey.

DEVELOPMENT OF THE ELECTRONICS PRINCIPLES INVENTORY

Creation of the EPI required a lengthy process of development and review. A chronological description of the process will not be undertaken in this report; however, the highlights of the process will be presented.

Personnel from the Occupational Survey Branch working on the project were well qualified in theoretical physics and electronics as well as having expertise in task analysis and survey development. Electronics experts from the five ATC training centers who averaged 12 years of maintenance experience and four years of electronics principles instruction experience spent several weeks working on the development of the EPI. Over three-hundred maintenance personnel from SAC, TAC, ADCOM, MAC, and AFCS participated in the development of the inventory.

In addition, personnel at the Electronics Engineering Department of the USAF Academy and at the Air Force Human Resources Laboratory reviewed and critiqued the EPI during its development.

The EPI used in the 308X0 survey contained 1266 items covering all electronics principles training given at the five ATC technical training centers.

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ADMINISTRATION

The EPI was administered in person and by mail to 174 DAFS 308X0 airmen worldwide. This total represents approximately 70 percent of all airmen assigned to the career ladder. However, due to personnel being in student status, classified locations, etc., only 260 airmen were eligible to be surveyed. Therefore, 87 percent of the eligible incumbents were surveyed.

There were no differences in the responses to the survey by airmen completing the EPI under supervision and airmen completing the booklet after receiving it through the mail. For purposes of analysis, data from both groups were combined.

RESULTS

Airmen in the 308X0 career ladder were found to specialize in either operations or maintenance, but did not perform both functions. The job groups identified during the EPI analysis of this ladder were found to be essentially the same as those reported in the Occupational Survey Report (AFPT 90-308-071, 16 Sep 75); that is, clusters of airmen were virtually identical regardless of whether those clusters were based on similarity of tasks performed or similarity of knowledges required to perform them. Evidently specific jobs require specific knowledge. This, of course, could be assumed, but it is rewarding to obtain objective support for such an assumption, at least in one career field.

The fact that knowledge inventories and task inventories are part of the same dimension has three major implications. First, it argues for expanding the knowledge inventory program into other fields. It also further validates the use of task inventory results in developing Specialty Knowledge Tests (SKT). Finally, it further supports the idea that task inventories are, in fact, measuring what a person does on the job and what knowledge he should be given during his training.

The data which reflect the percent of various groups of incumbents answering "yes" to each item of the EPI are presented in the appendix to this report. In the appendix, group summary three (GPSUM3), contains data for all DAFSC 308X0, 30830, 30870, and 30890 personnel. GPSUM7 contains data for all DAFSC 308X0, 30830, and 30870 maintenance personnel. GPSUM8 contains data for all DAFSC 308X0, 30830, and 30870 operator personnel. The 62 electronics subject areas are separated by heavy lines, and the corresponding modules from Keesler course 3AQR30020-1 are annotated along the right-hand side.

APPENDIX

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3	GPSUM7	PCT MURS ANSWRG YLS FOR HAI-7 DAFSC GPS		50
4	GPSUM8	PCT MURS ANSWRG YLS FOR OPEN DAFSC GPS		98

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE J0810 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY = SPC001 ALL J0810 AIRMEN
 GROUP IDENTITY = SPC002 ALL AIRMEN DAFSC J0830
 GROUP IDENTITY = SPC003 ALL AIRMEN DAFSC J0870
 GROUP IDENTITY = SPC004 ALL AIRMEN DAFSC J0890

CONTAINING 174 MEMBERS.
 CONTAINING 58 MEMBERS.
 CONTAINING 99 MEMBERS.
 CONTAINING 16 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 3083C 3027C 3069C

	DUTY	SPC 001	SPC 002	SPC 003	SPC 004
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	80	80	80	90
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	70	70	75	81
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	50	60	50	30
D	MCL CIRCUITS, SERIES AND PARALLEL RESISTANCE (TIME CONSTANTS), AND FILTERS	50	60	40	31
E	COUPLING, SOLDERING, AND RELAYS	53	60	51	38
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	71	80	80	40
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	53	60	40	38
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	50	60	50	40
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	48	53	40	31
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, METEODYNAMIC MODULATION,	42	47	43	13
K	AN SYSTEMS, FM SYSTEMS, AND HOMOGENEOUS SYSTEMS	70	70	82	80
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	55	62	55	25
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	57	67	55	31
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	52	62	51	19
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	50	57	40	31
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	40	43	40	25
Q	REGISTER, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	60	72	57	30
R	PHOTOASTROSCOPY, SHUTTER TRIGGERS, AND CABLE FABRICATION	40	50	37	19
S	INPUT/OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	48	55	46	21
T	IMPRINTED LASERS, AND DISPLAY TUBES	10	10	19	0
U	PROGRAMMING, DB AND POWER RATIOS	50	62	60	31

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30890 30832 30872 30890

DY-75K

MODULE 3 - ELECTRONIC MATERIALS

1 A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR
2 A1-02 DO YOU USE A PUBLICATION, SUCH AS A TECHNICAL INDEX OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY
3 A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.
4 A1-04 DO YOU FIND THE SQUARE ROOT OF A QUANTITY.
5 A1-05 DO YOU SOLVE FOR AN UNKNOWN QUANTITY.
6 A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.
7 A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.
8 A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.
9 A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS
10 A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS.
11 A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.
12 A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES.
13 A1-13 DO YOU SOLVE OR USE SIMILY VARIOUS EQUATIONS.
14 A1-14 DO YOU SOLVE OR USE PROPORTIONS.
15 A2-01 DO YOU USE THE TERM VOLTAGE OR VOLTS.
16 A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).
17 A2-03 DO YOU USE THE TERM ORN.
18 A2-04 DO YOU USE THE TERM ION.
19 A2-05 DO YOU USE THE TERM DYNE.
20 A2-06 DO YOU USE THE TERM AMPERE.
21 A2-07 DO YOU USE THE TERM NEUTRON.
22 A2-08 DO YOU USE THE TERM COULOMB.
23 A2-09 DO YOU USE THE TERM PROTON.
24 A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.
25 A3-02 DO YOU INSPECT RESISTORS.
26 A3-03 DO YOU CLEAN RESISTORS.
27 A3-04 DO YOU ADJUST RESISTORS.
28 A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.
29 A3-06 DO YOU REMOVE OR REPLACE RESISTORS.
30 A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB.
31 A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS.
32 A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, THERMOSTAT OR

MODULE 4 - DIRECT CURRENT AND VOLTAGE

MODULE 5 - RESISTANCE, RESISTORS, AND SCHEMATIC SYMBOLS

TASK GROUP SUMMARY
PERCENT NEWBIRNS PERFORMING

30890 30870 30890

0Y-25X

SPC 100
ZON 207
EOD 245
400 245

47 53 41 38

44 53 40 31

1101

1. The first group of people who are not allowed to enter the country are those who are not citizens of the United States.

22

24 34 27 13

24 29 33 6

27 31 26 13

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100

26 29 26 13

26 29 26 6

01 02 02 52

1

0 1 2 3 4 5 6 7 8 9

33
 44
 55
 66

41 95 58 14

	9	8	7	6	5	4	3	2	1
1	2	3	4	5	6	7	8	9	0

MODULE 6 - MULTIMETER USES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30630 30870 30890

DY-TSK

DY-TSK	DESCRIPTION	SPC				SPC				MODULE 11 - AC COMPU- FREQUENCY
		U01	U02	U03	U04	U01	U02	U03	U04	
0 59	01-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COILWING.	4	3	4	6					
0 60	01-09 DO YOU READ SCHEMATICS.	63	60	64	69					
0 61	02-01 DO YOU USE OR REFER THE TERM EFFECTIVE VOLTAGE (KMS).	54	55	52	63					
0 62	02-02 DO YOU USE OR REFER THE TERM PEAK TO PEAK VOLTAGE.	57	56	54	50					
0 63	02-03 DO YOU USE OR REFER THE TERM AVERAGE VOLTAGE (OCI).	51	59	47	38					
0 64	02-04 DO YOU USE OR REFER THE TERM WAVE LENGTH.	39	43	37	25					
0 65	02-05 DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	68	74	55	49					
0 66	02-06 DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	24	24	25	13					
0 67	03-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKER COILS IN YOUR PRESENT JOB.	47	62	40	25					
0 68	03-02 DO YOU INSPECT INDUCTORS.	36	45	33	19					
0 69	03-03 DO YOU CLEAN INDUCTORS.	29	41	26	0					
0 70	03-04 DO YOU ADJUST INDUCTORS.	31	47	25	4					
0 71	03-05 DO YOU REMOVE OR REPLACE INDUCTORS.	37	52	31	19					
0 72	03-06 DO YOU USE OR REFER TO INDUCTANCE.	37	48	33	13					
0 73	03-07 DO YOU USE OR REFER TO HENRIES.	27	36	24	6					
0 74	03-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	28	34	27	6					
0 75	03-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	8	9	8	6					
0 76	03-10 DO YOU USE OR REFER TO HYSTESIS LOSS IN INDUCTORS.	16	16	18	6					
0 77	03-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS.	14	12	15	13					
0 78	03-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE	6	3	7	0					
0 79	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	4	2	5	0					
0 80	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO	5	3	5	0					
0 81	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	6	7	6	0					
0 82	03-16 DO YOU CALCULATE INDUCTANCE FOR A PARTICULAR INDUCTOR USING FORMULAS.	6	7	4	6					
0 83	03-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES.	9	9	9	6					
0 84	03-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	10	10	10	6					
0 85	03-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	6	10	7	6					
0 86	03-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	18	17	18	19					
0 87	03-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	11	12	10	6					

MODULE 14 - INDUCTORS AND
REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30230 30870 30890

SPC SPC SPC SPC
U01 U02 U03 U04

0Y-TSA

0 88 83-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT
INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO
0 89 83-23 DO YOU WORK WITH POWER INDUCTORS.
0 90 83-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.
0 91 83-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.
C 92 C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS
CONTAINING CAPACITORS ON YOUR PRESENT JOB.
C 93 C1-02 DO YOU INSPECT CAPACITORS.
C 94 C1-03 DO YOU CLEAN CAPACITORS.
C 95 C1-04 DO YOU ADJUST CAPACITORS.
C 96 C1-05 DO YOU TEST CAPACITORS.
C 97 C1-06 DO YOU DISCHARGE CAPACITORS.
C 98 C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.
C 99 C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.
C 100 C1-09 DO YOU USE OR REFER TO ORBITAL SINESS OF ELECTROMS
IN A DIELECTRIC.
C 101 C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR
PICOFARADS.
C 102 C1-11 DO YOU USE OR REFER TO CAPACITANCE.
C 103 C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.
C 104 C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF
CAPACITORS.
C 105 C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.
C 106 C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.
C 107 C1-16 THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.
C 108 C1-17 THE CAPACITORS YOU WORK WITH IN AC CIRCUITS.
C 109 C1-18 THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH
BOTH DC AND AC.
C 110 C1-19 THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER
WHICH CIRCUITS.
C 111 C1-20 DO YOU CALCULATE CAPACITANCE FOR A PARTICULAR
CAPACITOR USING FORMULAS.
C 112 C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE
CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL
C 113 C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE
CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL
C 114 C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF
CAPACITORS IN SERIES.
C 115 C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF
CAPACITORS IN PARALLEL.
C 116 C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF
CAPACITORS IN SERIES-PARALLEL CIRCUITS.
C 117 C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT
CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY

10 17 19 6
23 24 23 13
24 24 23 14
39 50 33 31
51 82 46 38
40 32 35 19
28 40 45 0
36 52 31 6
34 48 29 6
33 40 33 0
41 55 35 19
14 12 15 6
1 0 2 0
45 53 42 25
44 47 43 31
7 9 7 6
33 33 36 13
20 21 20 6
20 17 23 6
39 52 35 13
36 48 33 13
48 53 42 31
2 2 1 6
5 3 5 6
3 5 5 0
6 5 6 6
17 14 20 6
17 12 20 6
14 14 14 6
21 26 19 6

MODULE 12 - CAPACITORS AND CAPACITIVE
REACTANCE

TASK GROUP SUMMARY

PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

SPC SPC SPC SPC
001 002 003 004

DY-TSK

C 118 C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.
C 119 C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO CAPACITANCE.
C 120 C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.
C 121 C1-30 DO YOU WORK WITH ROTORSTATOR CAPACITORS (VARIABLE).

C 122 C1-31 DO YOU WORK WITH COMPRESSION (TRIPPER) CAPACITORS.
C 123 C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).
C 124 C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).
C 125 C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).
C 126 C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).
C 127 C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS.

C 128 C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.
C 129 C2-02 DO YOU INSPECT TRANSFORMERS.
C 130 C2-03 DO YOU CLEAN TRANSFORMERS.
C 131 C2-04 DO YOU ADJUST TRANSFORMERS.
C 132 C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.
C 133 C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.
C 134 C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING.

C 135 C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTANCE AND MUTUAL IMPEDANCE (MT).

C 136 C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.
C 137 C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS.

C 138 C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS.

C 139 C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS.

C 140 C2-13 DO YOU CALCULATE IMPEDANCE INTERACTING FOR TRANSFORMERS.

C 141 C2-14 DO YOU WORK WITH AUTO TRANSFORMERS.

C 142 C2-15 DO YOU WORK WITH POWER TRANSFORMERS.

C 143 C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS.

C 144 C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.

C 145 C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMER.

C 146 C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE.

C 147 C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE.

C 148 C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES.

C 149 C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR

MODULE 15 - TRANSFORMERS

SPC SPC SPC SPC
001 002 003 00417 14 19 13
17 14 20 0
10 9 11 6
28 38 24 13
34 43 31 13
46 50 44 38
37 41 35 25
43 41 44 31
44 45 45 31
3 7 2 0
47 53 45 31
39 48 35 19
27 40 24 0
22 31 21 0
34 48 29 6
37 48 34 13
5 5 5 0
2 2 3 0
5 3 4 0
5 5 5 6
7 3 4 6
5 5 5 6
3 2 4 6
19 17 20 13
43 43 43 31
27 28 28 25
34 34 35 25
4 7 3 0
37 47 35 13
33 40 32 6
27 33 26 6
10 9 11 0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

SPC SPC SPC SPC
001 002 003 004

0Y-TSK

C 150 C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO
DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-
C 151 C2-24 DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC
SYMBOLS FOR TRANSFORMERS.
C 152 C2-25 DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS
SCHEMATIC SYMBOLS FOR TRANSFORMERS.
C 153 C2-26 DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS
FOR TRANSFORMERS.
C 154 C2-27 DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS
FOR TRANSFORMERS.
C 155 C2-28 DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS
FOR TRANSFORMERS.
C 156 C2-29 DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS
FOR TRANSFORMERS.
C 157 C2-30 DO YOU REFER TO THE COMBINATIONS OF THE ABOVE
SCHEMATIC SYMBOLS FOR TRANSFORMERS.
C 158 C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN
SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING
C 159 C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN
TRANSFORMERS YOU WORK WITH.
C 160 C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE
TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE
C 161 C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN
RATIOS FOR TRANSFORMERS.
C 162 C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS
USING TURNS RATIOS.
C 163 C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS
USING TURNS RATIOS.
C 164 C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH 3
PHASE TRANSFORMERS.
C 165 C2-38 DO YOU INSPECT 3 PHASE TRANSFORMERS.
C 166 C2-39 DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.
C 167 C2-40 DO YOU ADJUST 3 PHASE TRANSFORMERS.
C 168 C2-41 DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.
C 169 C2-42 DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE
TRANSFORMER.
C 170 C2-43 DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER
PARTS, SUCH AS A WINDING.
C 171 C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS.
C 172 C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS.
C 173 C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC
MATERIALS.
C 174 C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC
MATERIALS.

MODULE 13 - MAGNETISM

15 12 17 4

45 52 43 25

37 40 37 19

39 43 39 15

41 47 40 19

29 29 22 13

26 33 23 13

29 36 26 19

21 26 18 13

10 5 11 13

8 7 9 0

20 14 29 6

6 7 5 6

3 2 4 6

20 22 19 13

22 24 21 19

14 17 15 0

10 19 7 0

18 24 12 0

19 21 19 6

3 5 2 0

21 26 20 0

20 28 16 0

7 7 9 0

5 5 6 0

TASK GROUP SUMMARY
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C 175 C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.	7	7	9	0	
C 176 C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.	14	16	15	0	
C 177 C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.	21	16	28	0	
C 178 C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM.	2	2	3	0	
C 179 C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.	6	7	6	0	
C 180 C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTIONS.	11	5	16	0	
C 181 C3-11 DO YOU USE OR REFER TO FLUX DENSITY.	11	7	16	0	
C 182 C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT.	16	14	19	0	
C 183 C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.	8	5	11	0	
C 184 C3-14 DO YOU USE THE LEFT HAND RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.	7	5	10	0	
D 185 D1-01 DO YOU WORK WITH RCL, LCL, OR RCL CIRCUITS ON YOUR PRESENT JOB.	37	46	36	13	MODULE 7 - SERIES RESISTIVE CIRCUIT
D 186 D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.	7	5	8	6	MODULE 8 - PARALLEL RESISTIVE CIRCUITS
D 187 D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.	5	3	5	0	MODULE 9 - SERIES-PARALLEL RESISTIVE CIRCUITS
D 188 D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.	7	7	8	6	MODULE 21 - SERIES RCL CIRCUITS
D 189 D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.	7	7	8	6	MODULE 22 - PARALLEL RCL CIRCUITS
D 190 D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS.	7	5	8	6	
D 191 D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.	20	24	20	6	
D 192 D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.	13	14	13	6	
D 193 D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.	13	14	13	6	
D 194 D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.	14	16	14	6	
D 195 D1-11 DO YOU USE OR REFER TO APPARENT POWER (PAT) WHEN WORKING WITH RCL CIRCUITS.	9	5	11	6	
D 196 D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.	7	9	7	6	
D 197 D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	24	24	26	6	
D 198 D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.	31	34	31	13	
D 199 D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.	35	24	27	13	

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D 200 01-16 00 YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS. 29 33 29 4

D 201 01-17 00 YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS. 17 14 28 4

D 202 01-18 00 YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS. 25 24 24 4

D 203 01-19 00 YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS. 10 7 12 4

D 204 01-20 00 YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS. 25 28 25 13

D 205 01-21 00 YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS: SINE OF AN ANGLE & OPPOSITE SIDE

D 206 01-22 00 YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS. 3 3 4 0

D 207 01-23 00 YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS. 4 7 5 4

D 208 01-24 00 YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS. 3 0 3 4

D 209 01-25 00 YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS. 4 7 4 4

D 210 01-26 00 YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS. 2 2 2 4

D 211 01-27 00 YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS. 3 0 4 4

D 212 01-28 00 YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS. 5 3 5 4

D 213 01-29 00 YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS. 3 0 4 4

D 214 01-30 00 YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS. 5 3 5 4

D 215 01-31 00 YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS. 2 0 2 4

D 216 01-32 00 YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD. 4 5 3 4

D 217 01-33 00 YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW. 4 5 3 4

D 218 01-34 00 YOU CHECK CAPACITORS USING OHMMETERS. 30 41 27 4

D 219 01-35 00 YOU CHECK CAPACITORS USING SUBSTITUTION. 21 22 22 4

D 220 01-36 00 YOU CHECK INDUCTORS USING OHMMETERS. 28 38 24 0

D 221 01-37 00 YOU CHECK INDUCTORS USING SUBSTITUTION. 17 17 19 0

D 222 01-38 00 YOU USE OR REFER TO THE GENERAL RULE THAT IMPE-20, PP-11, AND PP-12 FOR RESONANT CIRCUITS. 2 2 2 0

D 223 01-39 00 YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS. 9 7 10 4

D 224 01-40 00 YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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BY-TSK

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0 225 01-01 DO YOU USE OR REFER TO THE GENERAL RULE THAT
CIRCUIT CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT
0 226 01-02 DO YOU USE OR REFER TO THE GENERAL RULE THAT
HALL POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK
0 227 01-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT
BANDWIDTH IS INVERSELY PROPORTIONAL TO Q
0 228 01-04 DO YOU DETERMINE HOW CHANGES IN FREQUENCY,
RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT
0 229 02-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR
REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR
0 230 02-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS
0 231 02-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE
VOLTAGE.
0 232 02-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT
INTERVALS.
0 233 02-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A
CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE
0 234 02-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT
CHARTS.
0 235 02-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE
CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A
0 236 02-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE
THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT
0 237 02-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE
COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND
0 238 02-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT
CURRENT IN LC CIRCUITS REACHES ITS MINIMUM VALUE (OR
0 239 03-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS ON
YOUR PRESENT JOB.
0 240 03-02 DO YOU INSPECT FILTER CIRCUITS.
0 241 03-03 DO YOU CLEAN FILTER CIRCUITS.
0 242 03-04 DO YOU ADJUST OR TROUBLESHOOT FILTER CIRCUITS.
0 243 03-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.
0 244 03-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER
CIRCUITS.
0 245 03-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER
CIRCUIT.

MODULE 24 - SERIES RESONANCE

MODULE 25 - PARALLEL RESONANCE

MODULE 26 - TIME CONSTANTS

MODULE 27 - FILTERS

PCY MOBS PLFNG BUTIES/TASKS BY DAPSE OPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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0 256 03-08 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	29	43	29	6
0 257 03-09 DO YOU WORK ON LOW PASS FILTERS.	34	40	24	13
0 258 03-10 DO YOU WORK ON HIGH PASS FILTERS.	35	41	38	6
0 259 03-11 DO YOU WORK ON BANDPASS FILTERS.	41	50	39	13
0 260 03-12 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	24	22	26	6
0 261 03-13 DO YOU WORK ON 2-ND-REJECT FILTERS.	5	9	3	6
0 262 03-14 DO YOU WORK ON 2-ND-REJECT FILTER CONFIGURATIONS.	28	28	34	6
0 263 03-15 DO YOU WORK WITH 1-SECTION FILTER CONFIGURATIONS.	29	31	29	13
0 264 03-16 DO YOU WORK WITH 1-SECTION FILTER CONFIGURATIONS.	30	34	36	6
0 265 03-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	13	22	6	13
0 254 03-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	25	24	27	6
0 257 03-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	27	26	26	13
0 258 03-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	23	21	26	6
0 259 03-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	15	24	9	13
0 260 03-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	5	3	5	6
0 261 03-23 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT	41	53	38	13
0 262 03-24 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND	40	48	39	13
0 263 03-25 DO YOU IDENTIFY THE COMPONENTS ASSOCIATED	33	33	34	13
0 264 03-26 DO YOU IDENTIFY THE COMPONENTS ASSOCIATED	39	43	39	13
0 265 03-27 DO YOU IDENTIFY THE COMPONENTS ASSOCIATED	32	43	28	6
0 266 03-28 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	25	29	29	6
0 267 03-29 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	29	36	27	6
0 268 03-30 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	36	45	33	13
0 269 03-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	34	38	34	13
0 270 03-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	27	26	29	13
0 271 03-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	32	34	33	13
0 272 03-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS	5	12	2	0

MODULE 28 - COUPLING

COUPLING CIRCUIT.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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SPC SPC SPC SPC
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DV-TSK

E 273 E2-01 ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.

E 274 E2-02 DO YOU SELECT TYPE OF SOLDER TO USE.

E 275 E2-03 DO YOU ADD FLUX TO CONNECTIONS.

E 276 E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS.

E 277 E2-05 DO YOU STRIP INSULATION FROM WIRES.

E 278 E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS.

E 279 E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS.

E 280 E2-08 DO YOU CUT WIRES.

E 281 E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS.

E 282 E2-10 DO YOU TIN SOLDERING IRON TIPS.

E 283 E2-11 DO YOU CLEAN SOLDERING IRON TIPS.

E 284 E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.

E 285 E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS.

E 286 E2-14 DO YOU INSPECT SOLDERED CONNECTIONS.

E 287 E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING.

E 288 E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.

E 289 E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.

E 290 E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL.

E 291 E2-19 DO YOU MAKE HARDWIRE TURRET CONNECTIONS.

E 292 E2-20 DO YOU MAKE HARDWIRE BIFURCATED CONNECTIONS.

E 293 E2-21 DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.

E 294 E2-22 DO YOU MAKE PRINTED CIRCUIT BOARD BIFURCATED CONNECTIONS.

E 295 E2-23 DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.

E 296 E2-24 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.

E 297 E2-25 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.

E 298 E2-26 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.

E 299 E3-02 DO YOU ADJUST RELAYS.

E 300 E3-03 DO YOU CLEAN RELAYS.

E 301 E3-04 DO YOU INSPECT RELAYS.

E 302 E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS.

E 303 E3-06 DO YOU REMOVE OR REPLACE PARTS OF RELAY.

E 304 E3-07 DO YOU TROUBLESHOOT RELAYS.

E 305 E3-08 DO YOU STRAIGHTEN RELAY CONTACTS.

E 306 E3-09 DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.

E 307 E3-10 DO YOU PERFORM ANY TASKS ON RELAY CORE.

E 308 E3-11 DO YOU PERFORM ANY TASKS ON RELAY COIL.

E 309 E3-12 DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.

E 310 E3-13 DO YOU PERFORM ANY TASKS ON RELAY SPRING.

E 311 E3-14 DO YOU PERFORM ANY TASKS ON RELAY SINGLE THROW (SPST), NORMALLY OPEN (NO) SCHEMATIC SYMBOLS

MODULE 76 - SOLDERING TOOLS AND MATERIALS

MODULE 77 - SOLDERING AND DESOLDERING PROCEDURES

MODULE 16 - RELAYS

TASK GROUP SUMMARY
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CV-TSK

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E 312 E3-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS

93 50 42 19

E 313 E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.

91 98 39 19

E 314 E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.

91 50 39 19

E 315 E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS.

30 33 28 25

E 316 E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE.

30 36 29 13

F 317 F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH MICROPHONES.

30 29 31 25

F 318 F1-02 DO YOU INSPECT MICROPHONES.

9 9 9 9

F 319 F1-03 DO YOU CLEAN MICROPHONES.

6 3 7 6

F 320 F1-04 DO YOU OPERATE (HAVE A JOB IN WHICH YOU USE MICROPHONES).

25 22 26 25

F 321 F1-05 DO YOU TROUBLESHOOT MICROPHONES AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO

5 9 4 0

F 322 F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES COMPONENTS.

5 5 5 0

F 323 F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.

7 9 7 0

F 324 F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.

3 2 5 0

F 325 F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.

9 9 10 0

F 326 F1-10 DO YOU PERFORM TASKS ON CONTACT MICROPHONES.

1 2 0 0

F 327 F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.

2 2 3 0

F 328 F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.

7 2 3 0

F 329 F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES.

0 0 0 0

F 330 F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH SPEAKERS, SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.

40 34 44 25

F 331 F2-02 DO YOU INSPECT SPEAKERS.

10 7 12 0

F 332 F2-03 DO YOU CLEAN SPEAKERS.

6 7 7 0

F 333 F2-04 DO YOU OPERATE (HAVE A JOB IN WHICH SPEAKERS ARE USED).

29 24 32 25

F 334 F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO

10 9 12 0

F 335 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.

6 5 7 0

F 336 F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.

13 9 16 0

F 337 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.

1 2 1 0

F 338 F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER CONES.

1 0 1 0

F 339 F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SPIDERS.

0 0 0 0

F 340 F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER FIELD COILS.

1 0 0 0

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F 341 F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS. 1 0 1 0

F 342 F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS. 2 2 1 0

F 343 F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS. 1 0 1 0

F 344 F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES. 1 0 1 0

F 345 F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB. 56 71 52 25

F 346 F3-02 DO YOU USE AN OSCILLOSCOPE TO PERFORM OPERATIONAL CHECKS. 53 71 48 19

F 347 F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS. 40 53 36 6

F 348 F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS. 40 55 36 6

F 349 F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY. 37 55 31 0

F 350 F3-06 DO YOU USE AN OSCILLOSCOPE TO MEASURE TIME. 35 47 33 0

F 351 F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE UTSAJAJOUS PATTERNS. 17 21 18 0

F 352 F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES. 38 53 33 6

F 353 F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER. 24 38 26 0

F 354 F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE. 34 55 35 0

F 355 F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL. 37 43 37 13

G 356 G1-01 DO YOU WORK WITH SEMICONDUCTION DIODES ON YOUR PRESENT JOB. 48 57 45 31

G 357 G1-02 DO YOU INSPECT DIODES. 39 48 37 13

G 358 G1-03 DO YOU REMOVE OR REPLACE DIODES. 39 50 34 19

G 359 G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT. 39 50 35 19

G 360 G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES. 4 5 4 0

G 361 G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES. TOGETHER WITH VALUES OF FORWARD AND REVERSE FOR DIODES. 5 3 5 4

G 362 G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES. 6 5 7 6

G 363 G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE. 32 36 32 19

G 364 G1-09 DO YOU IDENTIFY SEMICONDUCTION DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS. 37 47 34 19

G 365 G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW. 5 3 7 0

MODULE 20 - OSCILLOSCOPE USE

MODULE 29 - PN JUNCTIONS AND DIODES

TASK GROUP SUMMARY
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6 366 61-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD BIAS RESISTANCE.	33	41	31	6
6 367 61-12 DO YOU USE OR REFER TO DIODE COLOR CODING.	24	19	28	13
6 368 61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0	0
6 369 61-14 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0	0
6 370 61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538.	36	40	35	19
6 371 61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0	0
6 372 61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0	0
6 373 61-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE BIAS RESISTANCE.	32	36	31	13
6 374 61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT.	1	0	2	0
6 375 61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0	0
6 376 61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0	0
6 377 61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL).	2	0	3	0
6 378 61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM).	2	0	3	0
6 379 61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END.	34	36	33	25
6 380 61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS	17	16	16	13
6 381 61-26 IS IT IMPORTANT FOR YOU TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS	22	28	21	8
6 382 61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT	10	3	14	6
6 383 61-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	38	47	37	6
6 384 61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0
6 385 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0
6 386 61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0

PCT MORS PRFNG DUTIES/TASKS BY DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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BY-TSK

6 387 61-32 00 YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS.	1	0	1	0
6 388 61-33 00 YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS.	2	3	1	0
6 389 61-34 00 YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS.	5	3	6	0
6 390 61-35 00 YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS.	1	0	1	0
6 391 61-36 00 YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS.	1	0	1	0
6 392 61-37 00 YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL.	14	14	16	0
6 393 61-38 00 YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL.	14	14	16	0
6 394 61-39 00 YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS.	3	2	5	0
6 395 61-40 00 YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS.	3	2	5	0
6 396 61-41 00 YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS.	1	2	1	0
6 397 61-42 00 YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS.	7	5	9	0
6 398 61-43 00 YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL.	5	3	7	0
6 399 61-44 00 YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES.	34	41	32	19
6 400 61-45 00 YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS.	1	0	1	0
6 401 61-46 00 YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION.	32	29	34	25
6 402 61-47 00 YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING.	14	14	21	13
6 403 61-48 00 YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING.	15	12	16	13
6 404 61-49 00 YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING.	17	9	21	13
6 405 61-50 00 YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING.	22	19	25	13
6 406 62-01 00 YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB.	49	60	45	31
6 407 62-02 00 YOU INSPECT TRANSISTORS.	42	53	36	19
6 408 62-03 00 YOU REMOVE OR REPLACE TRANSISTORS.	40	55	34	19
6 409 62-04 00 YOU CHECK TRANSISTORS USING AN INSTRUMENT.	40	53	35	19
6 410 62-05 00 YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	41	55	36	19
6 411 62-06 00 YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	41	56	36	19
6 412 62-07 00 YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS.	41	63	36	19

MODULE 30 - TRANSISTORS

PCT MORS PRFNG DUTIES/TASKS BY DAFSC GPS

308X0 30830 30870 30890

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

SPC SPC SPC SPC
U01 U02 U03 U04

DY-TSK

6 413 62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.	10	12	11	0
6 414 62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.	0	9	9	0
6 415 62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).	16	19	17	0
6 416 62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.	7	3	10	0
6 417 62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.	45	55	42	19
6 418 62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS Q1, Q2, Q3, ETC.	46	57	43	19
6 419 62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.	34	40	34	19
6 420 62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IS NORMALLY SIGNIFICANTLY LARGER THAN THE EMITTER BASE CURRENT.	14	19	19	6
6 421 62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE SAME FOR ALL TRANSISTORS.	25	26	25	13
6 422 62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT INCREASES AS TEMPERATURE INCREASES.	13	10	15	6
6 423 62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.	7	2	10	6
6 424 62-19 DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.	9	3	12	6
6 425 62-20 DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.	4	2	5	6
6 426 62-21 DO YOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.	2	0	2	6
6 427 62-22 DO YOU CALCULATE THE BETA TRANSISTOR GAINS.	2	2	2	6
6 428 62-23 DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.	1	0	0	6
6 429 62-24 DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.	44	57	40	13
6 430 63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.				
6 431 63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS.	37	50	32	13
6 432 63-03 DO YOU ADJUST OR REPAIR TRANSISTOR AMPLIFIERS.	32	41	30	0
6 433 63-04 DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.	31	43	27	6
6 434 63-05 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTOR AMPLIFIERS.	37	48	34	6
6 435 63-06 DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIER.	27	41	21	6
6 436 63-07 DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.	35	48	31	6
6 437 63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN	21	21	22	6

MODULE 31 - AMPLIFIER PRINCIPLES

MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

DY-TSK

	SPC 001	SPC 002	SPC 003	SPC 004
6 430 63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	5	7	4	6
6 439 63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN	20	22	19	6
6 440 63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	4	5	3	6
6 441 63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	18	19	18	6
6 442 63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	3	5	2	6
6 443 63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER, DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS	3	2	3	6
6 444 63-15 DO YOU USE OR REFER TO THE OPERATING POINT (QUIESCENT POINT) FOR A TRANSISTOR.	9	9	10	6
6 445 63-16 DO YOU CALCULATE THE SPECIFIC RULESCLNT POINT FOR A PARTICULAR TRANSISTOR.	2	0	3	6
6 446 63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).	24	34	21	0
6 447 63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).	11	16	11	0
6 448 63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).	12	17	10	0
6 449 63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	5	3	5	6
6 450 63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	4	2	5	6
6 451 63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY	4	2	4	6
6 452 63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS	7	2	11	0
6 453 63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES.	2	2	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XC 30830 30870 30890

	SPC 001	SPC 002	SPC 003	SPC 004
6 454 63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	25	29	24	6
6 455 63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	22	22	6
6 456 63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	19	23	6
6 457 63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	22	22	23	6
6 458 63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	21	23	6
6 459 63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	18	19	19	6
6 460 63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE EMITTER (SWAPPING) RESISTOR	24	28	24	0
6 461 63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS	21	21	23	0
6 462 63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS	19	17	22	0
6 463 63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION	21	22	22	0
6 464 63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION	22	24	23	0
6 465 63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS	17	16	19	0
6 466 63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	30	33	31	6
6 467 63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION	29	34	29	0
6 468 63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	25	29	25	6
6 469 63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION	26	33	26	0
6 470 63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	18	16	22	0
6 471 63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	17	16	21	0
6 472 63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	29	31	30	6

CY-TSK

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

OV-TSK

SPC SPC SPC SPC
001 002 003 004

G 473 G3-44 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.

G 474 G3-45 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.

G 475 G3-46 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.

G 476 G3-47 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.

G 477 G3-48 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.

G 478 G3-49 THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO

G 479 G3-50 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.

G 480 G3-51 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.

G 481 G3-52 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.

G 482 G3-53 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS.

G 483 G3-54 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.

G 484 G3-55 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.

M 485 H1-01 DO YOU USE OR REFER TO VARACTORS.

M 486 H1-02 DO YOU USE OR REFER TO TUNNEL DIODES.

M 487 H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET).

M 488 H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.

M 489 H1-05 DO YOU USE OR REFER TO ZENER DIODES.

M 490 H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS.

M 491 H2-01 ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.

M 492 H2-02 DO YOU INSPECT POWER SUPPLIES.

M 493 H2-03 DO YOU CLEAN POWER SUPPLIES.

M 494 H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES.

M 495 H2-05 DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.

M 496 H2-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.

M 497 H2-07 DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.

M 498 H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY PARTS.

M 499 H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS.

M 500 H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.

MODULE 33 - SELECTED SOLID STATE DEVICES

MODULE 34 - SOLID STATE POWER SUPPLY RECTIFIERS AND FILTERS

MODULE 35 - SOLID STATE POWER SUPPLY REGULATIONS

24 29 28 0

22 21 24 6

21 19 25 0

17 14 20 0

14 14 20 0

10 7 11 6

11 9 13 6

14 16 19 0

20 16 27 0

21 22 22 0

15 12 19 0

24 33 28 0

42 41 43 31

34 33 37 19

43 43 44 13

35 33 39 13

51 54 48 31

53 57 53 38

49 62 44 31

41 53 37 19

34 53 30 0

38 53 33 6

34 50 30 19

37 48 34 13

33 48 27 6

34 47 32 19

39 45 39 6

41 50 40 6

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30EX0 30830 30870 30890

OV-TSK

SPC SPC SPC SPC
001 002 003 004

M 501 M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.
M 502 M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.
M 503 M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.
M 504 M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.
M 505 M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.
M 506 M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.
M 507 M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.
M 508 M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.
M 509 M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.
M 510 M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.
M 511 M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.
M 512 M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.
M 513 M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.
M 514 M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.
M 515 M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.
M 516 M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.
M 517 M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.
M 518 M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER.
M 519 M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.
M 520 M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.
M 521 M3-02 DO YOU INSPECT OSCILLATORS.
M 522 M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.
M 523 M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.
M 524 M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.
M 525 M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.
M 526 M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.
M 527 M3-08 DO YOU USE OR REFER TO FEEDBACK.
M 528 M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD).
M 529 M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.
M 530 M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.
M 531 M3-12 DO YOU USE OR REFER TO DAMPING.
M 532 M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.

MODULE 42 - PRINCIPLES OF OSCILLATIONS
MODULE 43 - SOLID STATE LC OSCILLATORS
MODULE 44 - SOLID STATE RC OSCILLATORS
MODULE 45 - SOLID STATE PULSED AND BLOCKING OSCILLATORS

43 53 40 13
21 24 22 0
49 57 41 25
35 41 36 6
40 50 36 19
37 43 35 25
39 47 36 19
35 40 34 19
23 26 23 6
36 43 34 19
36 40 36 13
34 38 35 13
29 28 31 13
24 22 26 6
24 22 26 6
27 29 27 13
28 28 29 13
16 33 7 6
5 2 7 0
44 53 41 25
37 48 32 19
34 45 32 6
30 45 25 0
32 41 29 6
32 47 28 0
32 43 29 6
34 45 35 6
31 38 30 6
28 24 29 13
34 34 36 13
20 16 43 6
32 38 31 6

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PCT MORS PRNG DUTIES/TASKS BY DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK

	SPC	SPC	SPC	SPC	SPC
	001	002	003	004	005
M 533 M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.	11	16	9	0	0
M 534 M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.	10	9	11	0	0
M 535 M3-16 DO YOU USE OR REFER TO UNDER DAMPING.	9	7	11	0	0
M 536 M3-17 DO YOU USE OR REFER TO OVER DAMPING.	10	7	12	0	0
M 537 M3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS	28	31	29	6	6
M 538 M3-19 DO OSCILLATORS YOU WORK WITH USE MC NETWORKS AS	26	26	28	6	6
M 539 M3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	34	34	35	19	19
M 540 M3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER	8	19	2	6	6
M 541 M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL	11	5	13	13	13
M 542 M3-23 DO YOU WORK WITH SHUNT MANTLEY SINUSOIDAL	10	7	11	13	13
M 543 M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.	14	9	14	13	13
M 544 M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.	7	7	8	0	0
M 545 M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.	6	2	7	6	6
M 546 M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF	27	41	21	6	6
M 547 M3-28 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT	41	50	40	13	13
M 548 M3-29 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.	30	36	30	6	6
M 549 M3-30 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING	26	31	25	0	0
M 550 M3-31 DO YOU CALIBRATE WAVE SHAPING OR GENERATING	22	26	23	0	0
M 551 M3-32 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR	30	40	28	0	0
M 552 M3-33 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE	29	36	28	0	0
M 553 M3-34 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR	28	36	26	0	0
M 554 M3-35 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE	29	36	29	0	0
M 555 M3-36 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS	21	21	22	6	6
M 556 M3-37 DO OSCILLATORS YOU WORK WITH USE MC NETWORKS AS	24	21	27	6	6
M 557 M3-38 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	30	33	32	6	6
M 558 M3-39 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER	6	14	2	0	0
M 559 M3-40 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.	30	34	30	6	6
M 560 M3-41 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.	33	38	34	6	6
M 561 M3-42 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.	33	38	33	6	6
M 562 M3-43 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF	6	14	3	0	0
M 563 M3-44 DO YOU WORK WITH MULTIVIBRATORS.	6	14	3	0	0

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

SPC SPC SPC SPC
U01 U02 U03 U04

0Y-75K

1 595 13-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE,
PENTODE, ETC.) AMPLIFICATION FACTORS.
1 596 13-24 DO YOU USE OR REFER TO ELECTRON TUBE
TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MMOS).
1 597 13-25 DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON
TUBE TRANSCONDUCTANCE.
1 598 13-26 DO YOU USE OR REFER TO THE ELECTRON TUBE
PARAMETER CALLED AC PLATE RESISTANCE.
1 599 13-27 DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE
RESISTANCE.
1 600 13-28 DO YOU USE OR REFER TO ELECTRON TUBE
INTERELECTRODE CAPACITANCE.
1 601 13-29 IN YOUR WORK WITH ELECTRON TUBES, DO YOU USE OR
REFER TO CHARACTERISTIC CURVES.
1 602 13-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE
VOLTAGE FOR A SPECIFIED BIAS.
1 603 13-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE
CURRENT FOR A SPECIFIED BIAS.
1 604 13-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS
REQUIRED FOR CUTOFF.
1 605 13-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS
REQUIRED FOR SATURATION.
1 606 13-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER
GAIN.
1 607 13-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER
EFFICIENCY.
1 608 13-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE
ELECTRON TUBE AMPLIFIER GAIN.
1 609 13-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE
AMPLIFIER GAIN.
1 610 13-38 DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE
AMPLIFIER GAIN.
1 611 13-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE
ELECTRON TUBE AMPLIFIER GAIN.
1 612 13-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES,
SUCH AS INPUT CAPACITANCE, ETC.
1 613 13-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION.
1 614 13-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.
1 615 13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND
THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN
TUBE SUBSTITUTION MATERIAL.
1 616 13-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL,
SUCH AS MANUALS, ETC.
J 617 JI-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR
CIRCUITS ON YOUR PRESENT JOB.
J 618 JI-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR
ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT

1 0 0 0 0
2 0 2 0
0 0 0 0
1 0 1 0
0 0 0 0
1 2 2 4
0 0 0 0
0 0 0 0
0 0 0 0
3 2 4 0
6 5 5 13
3 2 3 4
4 3 4 4
0 0 0 0
0 0 0 0
11 7 13 13
13 7 15 13
0 0 0 0
12 7 14 13
14 7 14 6
3 2 3 0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XC 30830 30870 30890

DY-TSA

	SPC U01	SPC U02	SPC U03	SPC U04	MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS	MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLI- FIERS AND TRIODE LIMITERS
J 619 J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAMPASE AMPLIFIERS.	4	2	4	0		
J 620 J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	7	2	10	4		
J 621 J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	4	2	4	0		
J 622 J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	6	3	6	0		
J 623 J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	3	2	4	0		
J 624 J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE?).	3	5	10	0		
J 625 J2-02 DO YOU WORK WITH CATHODE RAY TUBES.	22	14	26	6		
J 626 J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	6	7	6	0		
J 627 J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	7	9	7	0		
J 628 J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATONS.	3	5	2	6		
J 629 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATONS ARE USED.	3	5	3	0		
J 630 J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE	13	5	21	6		
J 631 J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	14	3	21	6		
J 632 J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	10	2	15	6		
J 633 J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	14	5	19	13		
J 634 J2-11 DO YOU USE OR REFER TO ANODAG COATINGS.	11	3	14	13		
J 635 J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS.	7	2	10	6		
J 636 J2-13 DO YOU USE OR REFER TO PERSISTENCE.	15	5	20	13		
J 637 J2-14 DO YOU USE OR REFER TO DECAY TIMES.	11	3	14	13		
J 638 J2-15 DO YOU USE OR REFER TO FLUORESCENCES.	7	3	9	6		
J 639 J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	11	5	13	13		
J 640 J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	35	43	34	6	MODULE 63 - HETERODYNING	
J 641 J3-02 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	20	34	27	6	MODULE 64 - MODULATION	
J 642 J3-03 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	24	33	26	6	MODULE 65 - DEMODULATION	
J 643 J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	20	29	29	6		
J 644 J3-05 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	7	10	9	0		
J 645 J3-06 DO YOU PERFORM ANY TASKS ON MODULATED OSCILLATORS.	21	22	23	0		
J 646 J3-07 DO YOU WORK ON AN TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	18	14	21	13		

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30-YO 3152 30870 30890

DY-TSK

K 647 KI-02 DO YOU INSPECT AM SYSTEMS.
K 648 KI-03 DO YOU CLEAN AM SYSTEMS.
K 649 KI-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.
K 650 KI-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.
K 651 KI-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.
K 652 KI-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.
K 653 KI-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.
K 654 KI-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.
K 655 KI-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.
K 656 KI-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 657 KI-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.
K 658 KI-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.
K 659 KI-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.
K 660 KI-15 DO YOU PERFORM ANY TASKS ON DETECTORS.
K 661 KI-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.
K 662 KI-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.
K 663 KI-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.
K 664 KI-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.
K 665 KI-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.
K 666 KI-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.
K 667 KI-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.
K 668 KI-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.
K 669 KI-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.
K 670 KI-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.
K 671 KI-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.
K 672 KI-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AN TRANSMITTER SCHEMATIC DIAGRAMS.
K 673 KI-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.
K 674 K2-01 DO YOU WORK WITH FM TRANSMIT ON RECEIVE SYSTEMS ON YOUR PRESENT JOB.
K 675 K2-02 DO YOU INSPECT FM SYSTEMS.
K 676 K2-03 DO YOU CLEAN FM SYSTEMS.
K 677 K2-04 DO YOU ALIGN FM SYSTEMS.
K 678 K2-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.
K 679 K2-06 DO YOU TROUBLESHOOT TO FM COMPONENTS.
K 680 K2-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.
K 681 K2-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.
K 682 K2-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 683 K2-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.
K 684 K2-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).

MODULE 68 - AM SYSTEMS

MODULE 69 - FM SYSTEMS

SPC	SPC	SPC	SPC
001	002	003	004
14	10	18	13
13	10	14	U
14	12	18	6
15	12	18	U
14	12	14	U
11	10	13	U
14	10	17	U
13	9	15	4
13	10	17	13
10	7	11	6
14	12	14	13
15	14	16	6
14	14	16	6
15	12	17	6
1	2	U	0
7	7	7	6
9	9	9	6
14	12	15	6
14	14	14	6
8	5	9	6
8	7	8	6
2	0	3	0
4	3	5	0
8	5	11	0
5	5	4	6
10	9	11	6
12	5	17	U
35	36	36	19
29	33	29	6
25	31	25	U
24	33	45	U
24	24	27	6
24	29	26	13
24	28	22	13
27	31	26	13
15	12	16	13
24	33	27	13
24	28	22	13

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

UY-TSK

SPC SPC SPC SPC
001 002 003 004

K 485 K2-12	DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	24	26	24	13
K 486 K2-13	DO YOU PERFORM ANY TASKS ON HP AMPLIFIERS.	24	26	26	13
K 487 K2-14	DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	26	26	27	13
K 488 K2-15	DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	25	24	46	13
K 489 K2-16	DO YOU PERFORM ANY TASKS ON LIMITERS.	21	19	23	13
K 490 K2-17	DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.	21	18	24	13
K 491 K2-18	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.	24	28	22	13
K 492 K2-19	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.	30	28	32	19
K 493 K3-01	DO YOU CONVERT DECIMAL BASE 10 NUMBERS TO OCTAL (BASE 8) NUMBERS.	55	41	64	50
K 494 K3-02	DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.	57	41	68	50
K 495 K3-03	DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.	53	40	63	38
K 496 K3-04	DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.	53	36	65	44
K 497 K3-05	DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.	54	40	64	44
K 498 K3-06	DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.	54	47	64	44
K 499 K3-07	DO YOU ADD BINARY NUMBERS TO GET A SUM.	37	28	46	13
K 500 K3-08	DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.	30	24	37	4
K 701 K3-09	DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.	32	22	39	13
K 702 K3-10	DO YOU ADD OCTAL NUMBERS TO GET A SUM.	38	31	44	19
L 703 LT-01	ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.	44	48	47	8
L 704 LT-02	DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	28	33	28	0
L 705 LT-03	DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	24	33	26	0
L 706 LT-04	DO YOU CONSTRUCT TRUTH TABLES FOR AND OR LOGIC SYMBOLS WITH STATE INDICATORS.	26	33	24	0
L 707 LT-05	DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.	26	31	24	0
L 708 LT-06	DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	41	48	41	6
L 709 LT-07	DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	41	48	41	6
L 710 LT-08	DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	41	48	41	6
L 711 LT-09	DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.	40	47	40	6
L 712 LT-10	DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES.	46	52	48	6
L 713 LT-11	DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.	46	52	48	6
L 714 LT-12	DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.	46	52	48	6

MODULE 51 - NUMBERING SYSTEM AND
MATHEMATICAL COMPUTATIONS

MODULE 52 - LOGIC FUNCTIONS AND
BOOLEAN EQUATIONS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XC 30830 30870 30890

SPC	SPC	SPC	SPC	SPC
001	002	003	004	004
46	52	48	6	6
33	34	36	6	6
14	10	17	6	6
5	3	7	0	0
17	10	22	0	0
27	24	30	0	0
14	7	19	0	0
17	9	24	0	0
20	16	24	6	6
9	9	10	0	0
29	26	33	6	6
21	19	24	0	0
24	22	27	6	6
29	33	30	6	6
32	38	31	13	13
31	34	31	13	13
35	36	37	13	13
35	36	37	13	13
36	38	37	13	13
32	31	34	13	13
29	29	31	13	13
29	28	31	13	13
29	33	29	6	6
26	28	28	6	6

L 715 L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.
 L 716 L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC TRANSISTOR LOGIC (DCTL) CIRCUITS.
 L 717 L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.
 L 718 L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.
 L 719 L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.
 L 720 L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.
 L 721 L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.
 L 722 L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.
 L 723 L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.
 L 724 L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.
 L 725 L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.
 L 726 L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.
 L 727 L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.
 L 728 L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.
 L 729 L2-14 DO YOU WORK WITH UNISTABLE (FLIP-FLOP) MULTIVIBRATORS.
 L 730 L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.
 L 731 L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.
 L 732 L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS.
 L 733 L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.
 L 734 L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.
 L 735 L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.
 L 736 L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.
 L 737 L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.
 L 738 L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.
 L 739 L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XC 30830 3087C 30890

OY-TSK

SPC SPC SPC SPC
U01 U02 U03 U04

L 740 L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS.		22	24	23	4
L 741 L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.		51	59	51	25
L 742 L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.		45	48	46	19
L 743 L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.		41	43	43	19
L 744 L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.		43	45	45	19
L 745 L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.		36	36	36	19
L 746 L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.		33	36	35	0
L 747 L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.		39	43	40	13
L 748 L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.		33	31	37	6
L 749 L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.		42	45	43	19
L 750 L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.		42	44	41	19
L 751 L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS.		29	26	32	13
L 752 L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING OF DECADE COUNTER.		30	28	33	13
L 753 L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.		31	34	32	6
L 754 L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.		26	28	28	0
L 755 L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE OF SHIFT REGISTER.		28	26	30	6
L 756 L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.		38	40	40	13
L 757 L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.		14	14	24	0
L 758 L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR UP-COUNTER HAVING COMPLEMENTED FLIP-FLOP.		21	19	24	0
L 759 L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTED FLIP-FLOP.		20	19	22	0
L 760 L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE OF SHIFT REGISTER.		22	26	23	0
L 761 L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.		11	7	16	0
L 762 L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.		13	9	16	0
L 763 L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.		21	22	22	0
L 764 L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A		29	21	28	6

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

BY-TASK

SPC SPC SPC SPC
001 002 003 004

M 745 M1-U1 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS.
M 746 M1-U2 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.
M 747 M1-U3 DO YOU WORK WITH PULSED OSCILLATIONS WITH
REGENERATIVE FEEDBACK.
M 748 M1-U4 DO YOU WORK WITH PULSED OSCILLATIONS WITHOUT
REGENERATIVE FEEDBACK.
M 749 M1-U5 DO YOU WORK WITH BLOCKING OSCILLATORS.
M 770 M1-U6 DO YOU USE OR REFER TO RISE TIME.
M 771 M1-U7 DO YOU USE OR REFER TO FALL OR FLYBACK TIME.
M 772 M1-U8 DO YOU USE OR REFER TO SLEEP TIME.
M 773 M1-U9 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF
SAWTOOTH WAVEFORMS.
M 774 M1-U10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH
WAVEFORMS.
M 775 M1-U11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH
WAVEFORMS.
M 776 M1-U12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH
WAVEFORMS.
M 777 M2-U1 DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.
M 778 M2-U2 DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS
WHILE USING SIGNAL GENERATORS.
M 779 M2-U3 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS
ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL
M 780 M2-U4 DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR
SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.
M 781 M2-U5 DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST
REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.
M 782 M2-U6 DO YOU USE AUDIO SINE-WAVE GENERATORS.
M 783 M2-U7 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS
SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.
M 784 M2-U8 DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.
M 785 M2-U9 DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.
M 786 M2-U10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION
GENERATORS.
M 787 M3-U1 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH
ALTERNATING CURRENT OR DIRECT CURRENT MOTORS ON
M 788 M3-U2 DO YOU INSPECT MOTORS.
M 789 M3-U3 DO YOU CLEAN OR LUBRICATE MOTORS.
M 790 M3-U4 DO YOU OPERATE MOTORS.
M 791 M3-U5 DO YOU REMOVE OR REPLACE COMPLETE MOTORS.
M 792 M3-U6 DO YOU REMOVE OR REPLACE MOTOR PARTS.
M 793 M3-U7 DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE
CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT
M 794 M3-U8 DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.

MODULE 19 - MOTORS AND GENERATORS

41 47 40 19

36 43 35 13

30 41 27 0

28 38 25 0

29 34 28 0

20 28 18 0

18 21 14 0

18 24 16 0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

SPC SPC SPC SPC
001 002 003 004

DY-TSK

M 795 M3-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	7	9	7	0
M 796 M3-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	9	9	9	0
M 797 M3-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR MOTORS.	11	12	12	0
M 798 M3-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	22	31	20	0
M 799 M3-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	10	10	11	0
M 800 M3-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	10	14	9	0
M 801 M3-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	7	9	6	0
M 802 M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	3	2	4	6
M 803 M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	9	9	10	0
M 804 M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE ON DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	3	2	4	0
M 805 M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS.	18	19	14	6
M 806 M3-20 DO YOU WORK WITH INDUCTION MOTORS.	16	19	15	6
M 807 M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS.	9	10	8	6
M 808 M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS.	14	17	14	0
M 809 M3-23 DO YOU INSPECT GENERATORS.	13	14	14	6
M 810 M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS.	10	12	10	0
M 811 M3-25 DO YOU OPERATE GENERATORS.	11	14	11	6
M 812 M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	5	5	6	0
M 813 M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS.	4	3	5	0
M 814 M3-28 DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO PARTS.	2	5	1	0
M 815 M3-29 DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	5	3	6	0
M 816 M1-01 DO YOU WORK WITH MEYERS ON YOUR PRESENT JOB.	94	53	49	6
M 817 M1-02 DO YOU DESCRIBE THE FUNCTIONS OR USES OF MEYER PERMANENT MAGNETS.	10	3	15	0
M 818 M1-03 DO YOU DESCRIBE THE FUNCTIONS OR USES OF MEYER MOVING COILS.	11	5	16	0
M 819 M1-04 DO YOU DESCRIBE THE FUNCTIONS OR USES OF MEYER SPIRAL SPRINGS.	9	3	13	0
M 820 M1-05 DO YOU READ MEYER SCALES.	42	52	41	6
M 821 M1-06 DO YOU EXTEND THE RANGE OF AMMETERS.	19	19	22	0
M 822 M1-07 DO YOU ZERO OHMMETERS.	34	52	35	0
M 823 M1-08 DO YOU ZERO AMMETERS.	25	31	24	0
M 824 M1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS.	20	21	23	0

MODULE 18 - METER MOVEMENTS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

328XC 30830 30870 30890

0Y-TSK

SPC SPC SPC SPC
001 002 003 004

N 825	N1-10 DO YOU USE ON REFER TO VOLTAGE SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	7	7	7	6
N 826	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	5	5	4	6
N 827	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	3	3	3	0
N 828	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	3	3	3	0
N 829	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	1	3	5	0
N 830	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	4	3	5	0
N 831	N2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	5	7	4	0
N 832	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS ON SATURABLE REACTORS COMPONENTS.	3	3	3	0
N 833	N2-08 DO YOU USE OR REFER TO MYSTICISM CURVES ON LOOPS.	2	2	2	0
N 834	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING ON LOAD.	2	2	3	0
N 835	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE REACTOR.	3	2	4	6
N 836	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	1	0	0	6
N 837	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	2	2	1	6
N 838	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	1	0	0	6
N 839	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	2	0	3	6
N 840	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	3	0	4	6
N 841	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	34	45	32	0
N 842	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	16	16	18	0
N 843	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	29	36	28	0
N 844	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	23	33	20	0
N 845	N3-04 DO YOU USE OR REFER TO PULSE RECURRENT TIME (PRT).	24	33	21	0
N 846	N3-05 DO YOU USE OR REFER TO PULSE RECURRENT FREQUENCY (PRF).	26	29	28	0
N 847	N3-06 DO YOU USE OR REFER TO DIFFERENTIATION CIRCUITS.	29	33	30	0
N 848	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	17	16	19	0
N 849	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.				

MODULE 40 - SATURABLE REACTORS AND MAGNETIC AMPLIFIERS

MODULE 48 - SOLID STATE SAWTOOTH GENERATORS

MODULE 49 - SOLID STATE TRAPEZOIDAL GENERATORS

PCT MORS PRFMG DUTIES/TASKS BY DAFSC GPS

GPSUMJ PAGE 30

TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

20860 0000 0007 0000

DY-TSK

		SPC U01	SPC U02	SPC U03	SPC U04
0 884 02-02 00 YOU INSPECT PULSE MODULATION SYSTEMS.		26	34	23	6
0 885 02-03 00 YOU CLEAN PULSE MODULATION SYSTEMS.		24	34	19	6
0 886 02-04 00 YOU ALIGN PULSE MODULATION SYSTEMS.		24	33	20	6
0 887 02-05 00 YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.		21	26	21	0
0 888 02-06 00 YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.		23	28	22	6
0 889 02-07 00 YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.		14	22	19	0
0 890 02-08 00 YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.		22	26	22	6
0 891 02-09 00 YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.		4	16	6	0
0 892 02-10 00 YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.		5	5	5	0
0 893 02-11 00 YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.		5	2	7	0
0 894 02-12 00 YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.		30	36	28	13
0 895 02-13 00 YOU WORK ON LINE PULSING MODULATION SYSTEMS.		1	0	1	0
0 896 02-14 00 YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.		2	3	1	0
0 897 02-15 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.		22	29	19	6
0 898 02-16 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHORE AND CHARGING DIODES.		7	5	9	0
0 899 02-17 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE-FORKING NETWORKS.		14	16	15	0
0 900 02-18 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.		13	14	13	0
0 901 02-19 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONs.		2	2	3	0
0 902 02-20 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.		4	10	8	0
0 903 02-21 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.		3	2	4	0
0 904 02-22 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.		14	14	12	0
0 905 02-23 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.		14	17	14	0
0 906 02-24 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.		13	14	13	0
0 907 02-25 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.		14	14	15	0
0 908 02-26 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.		9	5	12	0
0 909 02-27 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.		5	2	4	0
0 910 02-28 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH STAGE.		4	7	2	6

MODULE 71 - PULSE MODULATION SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30890 30891 30870 30890

DY-TSK

SPC SPC SPC SPC
001 002 003 004

Task	SPC 001	SPC 002	SPC 003	SPC 004
0 911 02-29 00 YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	16	19	15	6
0 912 02-30 00 YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	16	17	16	6
0 913 02-31 00 YOU USE OR REFER TO PULSE WIDTH (PW).	20	24	19	6
0 914 02-32 00 YOU USE OR REFER TO PULSE SHAPE.	17	20	14	6
0 915 02-33 00 YOU USE OR REFER TO PULSE POWER.	9	12	7	6
0 916 02-34 00 YOU USE OR REFER TO AVERAGE POWER.	10	12	9	6
0 917 02-35 00 YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	7	5	7	6
0 918 02-36 00 YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	12	14	12	0
0 919 02-37 00 YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.	3	5	2	6
0 920 02-38 00 YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.	2	3	1	6
0 921 02-39 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.	11	12	11	6
0 922 02-40 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.	20	24	18	6
0 923 03-01 00 YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.	39	40	40	25
0 924 03-02 00 YOU INSPECT ANTENNAS.	29	34	26	25
0 925 03-03 00 YOU CLEAN ANTENNAS.	24	33	20	6
0 926 03-04 00 YOU PHYSICALLY ALIGN ANTENNAS.	9	12	9	0
0 927 03-05 00 YOU ELECTRICALLY ALIGN ANTENNAS.	16	19	16	0
0 928 03-06 00 YOU TROUBLESHOOT TO ANTENNA.	17	21	17	0
0 929 03-07 00 YOU TROUBLESHOOT TO ANTENNA COMPONENTS.	22	24	24	0
0 930 03-08 00 YOU REMOVE OR INSTALL ANTENNAS.	7	2	11	0
0 931 03-09 00 YOU REMOVE OR REPLACE COMPONENTS ON ANTENNAS.	17	21	16	0
0 932 03-10 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF ELECTRIC FIELD LINES.	6	3	8	6
0 933 03-11 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF MAGNETIC FIELD LINES.	6	3	8	6
0 934 03-12 00 YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	3	0	5	6
0 935 03-13 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	2	0	3	0
0 936 03-14 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	1	0	2	0
0 937 03-15 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS	1	0	2	0
0 938 03-16 00 YOU WORK WITH HERTZ ANTENNAS.	2	0	3	0
0 939 03-17 00 YOU WORK WITH MARCONI ANTENNAS.	3	0	5	0

MODULE 67 - ANTENNAS

PCT MMS PRFMG DUTIES/TASKS BY OAFSC GPS

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TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

308X0 30830 20879 30890

SPC SPC SPC SPC
001 002 003 004

OY-TSK

0 940 03-18 DO YOU WORK WITH BROADSIDE ARRAYS.
0 941 03-19 DO YOU WORK WITH END-FIRE ARRAYS.
0 942 03-20 DO YOU WORK WITH CARDIOID ARRAYS.
0 943 03-21 DO YOU WORK WITH COLLINER ARRAYS.
0 944 03-22 DO YOU USE OR REFER TO THE TERM
ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH
ANTENNAS.
0 945 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF
ANTENNAS.
0 946 03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC
RADIATION FIELDS WHEN WORKING WITH ANTENNAS.
0 947 03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF
ANTENNAS.
0 948 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC
(E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA
0 949 03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC
(E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA
0 950 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY
POLARIZED.
0 951 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY
POLARIZED.
0 952 03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF
ANTENNAS YOU WORK ON.
0 953 03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS
NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR
PARASITIC ELEMENTS.
0 954 03-32 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS.
0 955 03-33 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS SERVING AS DIRECTORS.
0 956 03-34 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS SERVING AS REFLECTORS.
0 957 03-35 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
DIPYNT MEMBERS.
0 958 03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS.
0 959 03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS.
0 960 03-38 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF
ANTENNAS.
0 961 03-39 DO YOU WORK WITH ROTARY ANTENNA ARRAYS.
P 962 P1-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS
BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS
P 963 P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I H LOSS IN
TRANSMISSION LINES.

MODULE 66 - TRANSMISSION LINES

SPC SPC SPC SPC
001 002 003 004

21 9 29 6
2 0 4 0
0 0 0 0
9 5 13 0
5 5 6 0
11 9 14 0
4 9 1 4
21 22 20 13
5 3 4 0
2 2 1 4

4 10 7 0
30 33 32 0
3 0 4 0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XO 30830 30870 30890

DY-TSA

SPC SPC SPC SPC
001 002 003 004

P 969 P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH
FREQUENCY CURRENTS IN TRANSMISSION LINES.

P 965 P1-09 DO YOU REFER TO OR USE RADIATION LOSS IN
TRANSMISSION LINES.

P 966 P1-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN
TRANSMISSION LINES.

P 967 P1-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN
TRANSMISSION LINES.

P 968 P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.

P 969 P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.

P 970 P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.

P 971 P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.

P 972 P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE.

P 973 P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.

P 974 P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN
TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION

P 975 P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE
TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.

P 976 P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE
TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.

P 977 P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF
TRANSMISSION LINES.

P 978 P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF
TRANSMISSION LINES.

P 979 P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO
DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-
WAVELENGTH LINES.

P 980 P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE
MATCHED TO LOAD USING MATCHING TRANSFORMERS.

P 981 P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE
MATCHED TO A LOAD USING DELTA MATCHING.

P 982 P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED
FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL
IMPEADANCE (Z0) OF TRANSMISSION LINES.

P 983 P1-22 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (Z0)
OF TRANSMISSION LINES.

P 984 P1-23 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY
OF TRANSMISSION LINES.

P 985 P1-24 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR
(K) OF TRANSMISSION LINES.

P 986 P1-25 DO YOU COMPUTE THE ELECTRICAL LENGTH OF
TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.

P 987 P1-26 DO YOU CONSTRUCT TRANSMISSION LINES OF A
PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308XC 30530 10070 100

DY-TSK

P1003 P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR
P1004 P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE.
P1005 P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME.
P1006 P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE.
P1007 P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY.
P1008 P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION.
P1009 P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING.
P1010 P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS.
P1011 P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS.
P1012 P3-10 DO YOU WORK WITH REFLEX KLYSTRONS.
P1013 P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT).
P1014 P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS.
P1015 P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS.
P1016 P3-14 DO YOU WORK WITH MAGNETRONS.
P1017 P3-15 DO YOU INSPECT TWT OR KLYSTRONS.
P1018 P3-16 DO YOU CLEAN TWT OR KLYSTRONS.
P1019 P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY.
P1020 P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY.
P1021 P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR KLYSTRONS.
P1022 P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS.
P1023 P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON ASSEMBLY.
P1024 P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON COMPONENTS.
P1025 P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS.
P1026 P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS.
P1027 P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS.
P1028 P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS.
P1029 P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS.
P1030 P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS.
P1031 P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIERS.
P1032 P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC AMPLIFIERS.
P1033 P3-31 DO YOU INSPECT MAGNETRONS.
P1034 P3-32 DO YOU CLEAN MAGNETRONS.
P1035 P3-33 DO YOU ADJUST MAGNETRONS.
P1036 P3-34 DO YOU TUNE MAGNETRONS.
P1037 P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS.

SPC SPC SPC SPC
001 002 003 004

20 31 20 19

1 5 4 0

1 2 1 0

2 2 2 0

5 5 4 6

6 0 4 6

5 2 8 0

2 2 2 0

11 22 5 4

10 7 12 13

15 24 11 6

15 14 16 13

0 7 7 13

3 5 2 0

18 26 16 6

13 21 11 0

13 19 11 0

11 14 11 0

16 26 12 0

16 24 13 0

15 22 13 0

12 21 9 0

29 27 12 0

19 28 18 0

21 28 20 0

21 28 20 6

22 24 21 6

21 28 19 6

20 24 16 5

20 24 19 6

1 3 0 0

1 3 0 0

1 3 0 0

MODULE 75 - MICROWAVE AMPLIFIER AND OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30830 30830

01-TSK

SPC SPC SPC SPC
001 002 003 004

P1078	P3-36	DO YOU TROUBLESHOOT MAGNETONS.	1	3	0	0
P1079	P3-37	DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	1	3	0	0
P1080	P3-38	DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETONS.	1	3	0	0
P1081	P3-39	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	1	2	1	0
P1082	P3-40	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	1	2	1	0
P1083	P3-41	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GNDS.	1	2	1	0
P1084	P3-42	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	2	2	2	0
P1085	P3-43	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	1	2	1	0
P1086	P3-44	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GNDS.	1	2	1	0
P1087	P3-45	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	1	2	1	0
P1088	P3-46	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GNDS.	1	2	1	0
P1089	P3-47	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	1	2	1	0
P1090	P3-48	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REFLECTOR (REFLECTOR) PLATES.	6	2	7	13
P1091	P3-49	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GNDS.	5	2	6	6
P1092	P3-50	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GNDS.	3	2	3	6
P1093	P3-51	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	5	2	7	6
P1094	P3-52	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	3	2	3	6
P1095	P3-53	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	5	3	5	6
P1096	P3-54	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	5	3	5	6
P1097	P3-55	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	6	5	6	6
P1098	P3-56	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	7	12	5	0
P1099	P3-57	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	6	12	4	0
P1100	P3-58	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GNDS.	5	9	9	0
P1101	P3-59	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	6	12	4	0
P1102	P3-60	DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELICES.	6	12	4	0

TASK GROUP SUMMARY

PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

DT-TSK

SPC SPC SPC SPC
001 302 003 004

P1103 P3-01 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT COLLECTORS.	6	12	9	0
P1104 P3-02 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MAGNETS.	3	7	1	0
P1105 P3-03 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ATTENUATORS.	5	13	3	0
P1106 P3-04 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS.	12	10	14	6
P1107 P3-05 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES.	4	7	9	4
P1108 P3-06 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER TUNER CAVITIES.	7	3	10	6
P1109 P3-07 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES.	15	12	16	6
P1110 P3-08 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS.	7	9	6	6
P1111 P3-09 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES.	2	2	2	0
P1112 P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.	0	0	0	0
P1113 P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING PINS.	0	0	0	0
P1114 P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.	0	0	0	0
P1115 P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS.	0	0	0	0
P1116 P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT CAVITIES.	0	0	0	0
P1117 P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.	0	0	0	0
P1118 P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS.	0	0	0	0
Q1119 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS.	47	50	47	25
Q1120 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS.	47	52	47	25
Q1121 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT REGISTERS.	47	47	47	19
Q1122 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL ON STORAGE REGISTERS.	47	47	47	19
Q1123 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS.	43	43	43	13
Q1124 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE REGISTER.	32	29	36	6
Q1125 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	35	38	36	13
Q1126 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB.	49	53	49	25
Q1127 Q2-02 DO YOU USE OR REFER TO DELAY LINES.	23	19	28	19
Q1128 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES.	26	19	32	13
Q1129 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS.	10	2	15	6
Q1130 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES.	33	28	38	19
Q1131 Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF MEMORY SYSTEMS.	29	16	30	13

PCY HOURS PRFNG DUTIES/TASKS BY DAFSC SPS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK

SPC	100	200	300	400
SPC	001	002	003	004

Q1132 Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS.
Q1133 Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS.
Q1134 Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES.

05-01 ON YOUR PRESENT JOB DO YOU WORK WITH DIGITAL-VO-
-00-73VALSIS WITH YOUA 10-00 51116
057417

ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D)

41136 43-02 DO YOU COMPUTE THE OUTPUT VOLTAGE OR AN ELECTRO

MECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTER FOR A

Q1137 QJ-UJ DO YOU USE OR REFER TO THE GENERAL RULE THAT THE

COUNT IN A ELECTROMECHANICAL DIGITAL-TO-ANALOG (C/D)[illegible]

91139 03-05 DO YOU PERFORM ANY TASKS ON THE SAMPLE FUNCTION
BINARY COUNT IN ELECTRONIC DIGITAL SIGNAL LOG (10/12)

VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER

Q1140 Q3-Q6 DO YOU PERFORM ANY TASKS ON THE HOLD FUNCTION OF

VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER

Q1141 Q3-07 DO YOU PERFORM ANY TASKS ON THE COMPARE FUNCTION

OF VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER

ZFJZBAMDS 10(V) 1WZ1918-01-301VMV ZM:2 310V1MVR EQ
00143UMF 7211918 THE MO EXECS ANY MROADA ODA 09 00-EO 24119

91143 03-09 DO YOU PERFORM ANY TASKS ON THE COM? REMEMBER
OF VARIABLE TIME ANALOG-DIGITAL (A/D) CONVERTER

WHICH FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A/D)

Q1144 Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D

CONVERTERS.

Q1145 QJ-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D

CONVERTS.

8149 03-12 DO YOU USE ON REFER TO COMPARE FUNCTION OF AND
COMPARISON.

81147 03-13 DO YOU WANT OR REFER TO DIGITAL FUNCTION OF AND
CONVERTERS.

SMYERS
CONVERTERS

Q1148 QJ-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-CONVERTERS?

DIGITAL (A/D) CONVERTERS.

WILL YOU WORK WITH PHARMACYSTOCK ON YOUR

PRESENT JOB:

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MODULE 55 - DIGITAL ANALOG CONVERSIONS

PCT MBS PRFMC DUTIES/TASKS BY DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

GPSUM3 PAGE 46

30840 30830 30870 30890

DT-TSK

R1151 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.
R1152 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.
R1153 R3-01 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.
R1154 R3-02 DO YOU FABRICATE COAXIAL CABLES.
S1155 S1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.
S1156 S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OF NIXIE LIGHT DECODER SYSTEMS.
S1157 S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.
S1158 S2-01 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.
S1159 S3-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.
S1160 S3-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.
S1161 S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.
S1162 S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.
S1163 S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.
S1164 S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.
S1165 S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.
S1166 S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.
S1167 S3-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.
T1168 T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.
T1169 T1-02 DO YOU INSPECT INFRARED SYSTEMS.
T1170 T1-03 DO YOU CLEAN INFRARED SYSTEMS.
T1171 T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.
T1172 T1-05 DO YOU OPERATE INFRARED SYSTEMS.
T1173 T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.
T1174 T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.
T1175 T1-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.
T1176 T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.
T1177 T1-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.

MODULE 78 - FABRICATE MULTI-CONDUCTOR AND COAXIAL CABLES

SPC SPC SPC SPC
001 002 003 004

26 41 21 0

25 34 23 0

21 14 24 19

20 29 28 19

41 41 42 31

32 36 32 6

6 3 11 0

24 26 26 0

6 5 6 0

2 3 1 0

1 0 1 0

1 0 1 0

1 0 1 0

1 0 1 0

4 2 5 0

4 3 4 0

5 3 5 0

2 2 4 0

9 2 14 0

2 0 4 0

2 0 3 0

3 0 5 0

2 0 3 0

2 0 3 0

2 0 4 0

2 0 3 0

2 0 3 0

PCT MEMS PRFNG DUTIES/TASKS BY DAFSC 6P5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

SPSUM3 PAGE 48

30870 30830 30870 30870

DT-TSK

DT-TSK	SPC 001	SPC 002	SPC 003	SPC 004
T1220 T2-24 DO YOU WORK WITH HELICAL FLASHTUBES.	U	0	0	0
T1221 T2-27 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	U	0	0	0
T1222 T2-28 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	U	0	0	0
T1223 T2-29 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	U	0	0	0
T1224 T2-30 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH XENON.	U	0	0	0
T1225 T2-31 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH CESIUM-HELIUM.	1	0	1	0
T1226 T2-32 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0	0
T1227 T2-33 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH NEODYMIUM IN GLASS.	0	0	0	0
T1228 T2-34 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIDE.	1	0	1	0
T1229 T3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE	9	9	8	6
T1230 T3-02 DO YOU INSPECT DVST OR HMST.	3	5	1	0
T1231 T3-03 DO YOU CLEAN DVST OR HMST.	2	3	1	0
T1232 T3-04 DO YOU ADJUST OR CALIBRATE DVST OR HMST.	1	2	1	0
T1233 T3-05 DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVST OR HMST).	4	3	4	0
T1234 T3-06 DO YOU TROUBLESHOOT DVST OR HMST CIRCUITS.	2	3	2	0
T1235 T3-07 DO YOU REMOVE OR REPLACE THE DVST OR HMST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE	1	3	0	0
T1236 T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVST.	2	0	3	0
T1237 T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF HMST.	1	0	2	0
T1238 T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS.	1	0	1	0
T1239 T3-11 DO YOU PERFORM TASKS ON WRITE GUNS.	1	0	1	0
T1240 T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0	0
T1241 T3-13 DO YOU PERFORM TASKS ON ERASE GUNS.	1	0	1	0
T1242 T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS.	1	0	1	0
T1243 U1-01 ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	25	31	25	6
U1244 U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS.	18	14	23	0
U1245 U1-03 DO YOU USE OR REFER TO PROGRAMS.	21	21	23	0
U1246 U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS.	11	5	14	0
U1247 U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	6	3	8	0
U1248 U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS.	1	0	2	0
U1249 U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS.	14	16	23	0
U1250 U1-08 DO YOU USE OR REFER TO TIME-SHARING.	9	2	13	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 2890

DY-TSK		SPC				SPC			
		001	U02	003	004	001	U02	003	004
U1251	U1-09 DO YOU USE OR REFER TO DATA WORDS.	19	12	28	0				
U1252	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.	23	24	24	4				
U1253	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS.	14	17	14	0				
U1254	U1-12 DO YOU USE OR REFER TO STEERING INFORMATION.	9	7	11	0				
U1255	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.	12	10	14	0				
U1256	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.	7	7	8	0				
U1257	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.	3	3	3	0				
U1258	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.	20	21	20	4				
U1259	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.	16	17	16	4				
U1260	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.	13	10	16	0				
U1261	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.	14	14	16	0				
U1262	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.	17	16	19	4				
U1263	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.	16	22	13	0				
U1264	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION.	39	41	39	25				
U1265	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.	7	7	5	13				
U1266	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.	7	7	5	13				
U1267	DUMMY QUESTION TO FACILITATE SETCHECK	4	5	4	0				

PCT MEMS ANSWERS YES FOR MAINY DAFSC GRS.

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE 3080 CAREER FIELD.

GPSUM7 PAGE 50

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY - GP0017	STAGE - 17	SPATH ORDER FROM 65 TO 147	CONTAINING	83 MEMBERS.
GROUP IDENTITY - SPC024	ALL MEMBERS OF GP017 WHO ARE DAFSC 30830	CONTAINING	35 MEMBERS.	
GROUP IDENTITY - SPC025	ALL MEMBERS OF GP017 WHO ARE DAFSC 30870	CONTAINING	43 MEMBERS.	

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE

308X0 30830 3087C

	DUTY	GP	SPC	SPC
		0017	024	026
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	100	100	100
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	100	100	100
C	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS COUPLING, SOLDERING, AND RELAYS	93	97	91
D	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	100	100	100
E	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	92	94	91
F	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	100	100	100
G	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	90	86	93
H	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, METEODYNING, MODULATION, AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	76	66	86
I	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	94	91	95
J	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	95	97	98
K	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	89	91	93
L	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	86	83	88
M	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	73	66	79
N	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	93	97	93
O	PHANTASYMONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	84	83	86
P	INPUT/OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	81	80	84
Q	INFRARED, LASERS, AND DISPLAY TUBES	19	11	26
R	PROGRAMMING, DB AND POWER RATIOS	81	80	84

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X3 308X2 308X1

0Y-TSK

- A 1 A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR ORDER OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY A 2 A1-02 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS. A 3 A1-03 DO YOU FIND THE SQUARE ROOT OF A QUANTITY. A 4 A1-04 DO YOU SOLVE FOR AN UNKNOWN QUANTITY. A 5 A1-05 DO YOU CONVERT NUMBERS TO LOGARITHMS. A 6 A1-06 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF A 7 A1-07 DO YOU SOLVE QUADRATIC EQUATIONS. A 8 A1-08 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS A 9 A1-09 IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS A 10 A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS. A 11 A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT. A 12 A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES. A 13 A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS. A 14 A1-14 DO YOU SOLVE OR USE PROPORTIONS. A 15 A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT. A 16 A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF). A 17 A2-03 DO YOU USE THE TERM OHM. A 18 A2-04 DO YOU USE THE TERM ION. A 19 A2-05 DO YOU USE THE TERM DYNE. A 20 A2-06 DO YOU USE THE TERM AMPERE. A 21 A2-07 DO YOU USE THE TERM NEUTRON. A 22 A2-08 DO YOU USE THE TERM COULOMB. A 23 A2-09 DO YOU USE THE TERM PROTON. A 24 A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB. A 25 A3-02 DO YOU INSPECT RESISTORS. A 26 A3-03 DO YOU CLEAN RESISTORS. A 27 A3-04 DO YOU ADJUST RESISTORS. A 28 A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS. A 29 A3-06 DO YOU REMOVE OR REPLACE RESISTORS. A 30 A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB. A 31 A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS. A 32 A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, MEOSYAT OR

GP SPC SPC
0017 024 025

81 86 79

61 60 60

93 96 92

30 23 37

46 49 42

13 9 16

16 14 16

8 0 16

6 0 9

28 29 28

30 26 35

12 3 19

13 9 19

34 31 35

99 100 98

63 63 63

99 100 98

36 31 40

22 23 23

98 97 98

35 31 40

35 37 35

34 31 37

99 100 98

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67 74 70

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87 89 86

87 91 89

48 46 51

95 97 93

89 89 88

MODULE 3 - ELECTRONIC MAP EMULATOR

MODULE 4 - DIRECT GREEN AND RED

MODULE 5 - RESISTANCE, RESISTOR
SCHEMATIC SYMBOLS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XC 30830 30870

DY-TSK

0 59	01-08	DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	0	4	4	001	SPC	SPC
0 60	01-09	DO YOU READ SCHEMATICS.	94	94	98	001	024	025
0 61	02-01	DO YOU USE OR REFER THE TERM EFFECTIVE VOLTAGE (RMS).	90	89	91			
0 62	02-02	DO YOU USE OR REFER THE TERM PEAK TO PEAK VOLTAGE.	96	100	93			
0 63	02-03	DO YOU USE OR REFER THE TERM AVERAGE VOLTAGE (DC).	83	84	89			
0 64	02-04	DO YOU USE OR REFER THE TERM WAVE LENGTH.	64	63	67			
0 65	02-05	DO YOU USE OR REFER THE TERM FREQUENCY.	95	97	95			
0 66	02-06	DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	43	40	47			
0 67	03-01	DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	93	100	88			
0 68	03-02	DO YOU INSPECT INDUCTORS.	71	74	72			
0 69	03-03	DO YOU CLEAN INDUCTORS.	60	69	60			
0 70	03-04	DO YOU ADJUST INDUCTORS.	65	77	58			
0 71	03-05	DO YOU REMOVE OR REPLACE INDUCTORS.	78	86	72			
0 72	03-06	DO YOU USE OR REFER TO INDUCTANCE.	73	80	72			
0 73	03-07	DO YOU USE OR REFER TO MEMRIES.	57	60	56			
0 74	03-08	DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	57	57	58			
0 75	03-09	DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	17	14	17			
0 76	03-10	DO YOU USE OR REFER TO HYSTENESIS LOSS IN INDUCTORS.	34	26	42			
0 77	03-11	DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS.	28	20	35			
0 78	03-12	DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE	12	6	16			
0 79	03-13	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	8	3	12			
0 80	03-14	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO	10	6	12			
0 81	03-15	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	12	11	14			
0 82	03-16	DO YOU CALCULATE INDUCTANCE FOR A PARTICULAR INDUCTOR USING FORMULAS.	12	11	9			
0 83	03-17	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES.	18	14	21			
0 84	03-18	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	19	17	21			
0 85	03-19	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	17	17	16			
0 86	03-20	DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	36	29	42			
0 87	03-21	DO YOU CALCULATE INDUCTIVE REACTANCE.	22	20	21			

MODULE 11 - AC COMPUTATION AND
EFFECTIVE, SPC-80M

MODULE 11 - INDUCTORS AND
REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870

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GP SPC SPC
0017 024 025

B 88 B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO
B 89 B3-23 DO YOU WORK WITH POWER INDUCTORS.
B 90 B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.
B 91 B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.
C 92 C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS ON YOUR PRESENT JOB.
C 93 C1-02 DO YOU INSPECT CAPACITORS.
C 94 C1-03 DO YOU CLEAN CAPACITORS.
C 95 C1-04 DO YOU ADJUST CAPACITORS.
C 96 C1-05 DO YOU TEST CAPACITORS.
C 97 C1-06 DO YOU DISCHARGE CAPACITORS.
C 98 C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.
C 99 C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.
C 100 C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.
C 101 C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.
C 102 C1-11 DO YOU USE OR REFER TO CAPACITANCE.
C 103 C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.
C 104 C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.
C 105 C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.
C 106 C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.
C 107 C1-16 THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.
C 108 C1-17 THE CAPACITORS YOU WORK WITH ARE IN AC CIRCUITS.
C 109 C1-18 THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH BOTH DC AND AC.
C 110 C1-19 THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER WHICH CIRCUITS.
C 111 C1-20 DO YOU CALCULATE CAPACITANCE FOR A PARTICULAR CAPACITOR USING FORMULAS.
C 112 C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL
C 113 C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL
C 114 C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES.
C 115 C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL.
C 116 C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS.
C 117 C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY

MODULE 12 - CAPACITORS AND CAPACITIVE REACTANCE

37 29 44
42 37 47
45 37 49
75 80 70
92 100 98
70 86 77
58 46 58
75 86 70
71 80 67
69 66 77
84 91 81
29 20 35
2 0 5
90 89 93
84 77 93
16 14 16
67 54 79
39 34 42
42 31 53
75 86 72
70 80 67
87 86 88
4 3 2
10 6 12
10 9 12
12 9 14
36 23 47
35 20 47
29 23 33
42 40 44

PCT HORS ANSWER YES FOR MAINT DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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MAINTENANCE
308X0 30830 30870

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GP SPC SPC
0017 024 025

C 110 C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT
CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.
C 119 C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT
CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO
C 120 C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.
C 121 C1-30 DO YOU WORK WITH ROTOR-S'ATOR CAPACITORS
(VARIABLE).
C 122 C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS.
C 123 C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).
C 124 C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).
C 125 C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).
C 126 C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).
C 127 C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF
CAPACITORS.
C 128 C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.
C 129 C2-02 DO YOU INSPECT TRANSFORMERS.
C 130 C2-03 DO YOU CLEAN TRANSFORMERS.
C 131 C2-04 DO YOU ADJUST TRANSFORMERS.
C 132 C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.
C 133 C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.
C 134 C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH
AS THE PRIMARY WINDING.
C 135 C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION
AND MUTUAL INDUCTANCE (H).
C 136 C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.
C 137 C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING
WHEN WORKING WITH TRANSFORMERS.
C 138 C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS
USING CURRENT OR VOLTAGE RATIOS.
C 139 C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING
WITH TRANSFORMERS.
C 140 C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR
TRANSFORMERS.
C 141 C2-14 DO YOU WORK WITH AUTOTRANSFORMERS.
C 142 C2-15 DO YOU WORK WITH POWER TRANSFORMERS.
C 143 C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS.
C 144 C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.
C 145 C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF
TRANSFORMER.
C 146 C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY
MEASURING RESISTANCE.
C 147 C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS
BY MEASURING RESISTANCE.
C 148 C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS
BY MEASURING OUTPUT VOLTAGES.
C 149 C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS
TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR

MODULE 10 - TOTAL POINTS

93 89 98
76 80 77
55 64 53
46 51 47
70 80 65
78 80 79
8 9 9
5 3 7
10 6 14
11 9 12
14 6 21
11 9 12
6 3 7
39 29 47
84 71 95
53 46 58
66 57 74
9 11 7
78 77 81
69 66 74
57 54 60
20 14 26

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
30830 30870

CP	SPC	SPC	SPC
0017	024	025	025
01-75K			
C 150	C2-23	DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN SYMBOLS FOR TRANSFORMERS.	31 20 40
C 151	C2-24	DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS.	89 86 93
C 152	C2-25	DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS.	76 66 84
C 153	C2-26	DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	80 71 86
C 154	C2-27	DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	83 77 88
C 155	C2-28	DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	98 49 47
C 156	C2-29	DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	52 54 49
C 157	C2-30	DO YOU REFER TO THE COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	58 60 56
C 158	C2-31	DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING TRANSFORMERS YOU WORK WITH.	42 43 42
C 159	C2-32	DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH.	20 9 26
C 160	C2-33	DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIOS FOR TRANSFORMERS.	17 11 21
C 161	C2-34	DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS.	40 23 53
C 162	C2-35	DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	13 11 12
C 163	C2-36	DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	7 3 9
C 164	C2-37	DOES TO 3 JOB INVOLVE ANY TASKS DEALING WITH 3 PHASE TRANSFORMERS.	42 37 44
C 165	C2-38	DO YOU INSPECT 3 PHASE TRANSFORMERS.	42 43 44
C 166	C2-39	DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.	30 29 35
C 167	C2-40	DO YOU ADJUST 3 PHASE TRANSFORMERS.	22 31 16
C 168	C2-41	DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.	37 40 37
C 169	C2-42	DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE TRANSFORMER.	40 34 44
C 170	C2-43	DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER PARTS, SUCH AS A WINDING.	6 9 5
C 171	C3-01	DO YOU USE OR REFER TO PERMANENT MAGNETS.	34 43 28
C 172	C3-02	DO YOU USE OR REFER TO TEMPORARY MAGNETS.	35 43 30
C 173	C3-03	DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS.	14 11 19
C 174	C3-04	DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS.	10 9 12

MODULE 13 - MAGNETISM

PCT MEMBERS ANSWERS YES FOR MAINT DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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MAINTENANCE
30840 30830 30870

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C 175 C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.
C 176 C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.
C 177 C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.
C 178 C3-08 DO YOU USE OR REFER TO WEDEM'S THEORY OF MAGNETISM.
C 179 C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.
C 180 C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION.
C 181 C3-11 DO YOU USE OR REFER TO FLUX DENSITY.
C 182 C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT.
C 183 C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.
C 184 C3-14 DO YOU USE THE LEFT THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.
D 185 D1-01 DO YOU WORK WITH RCL, LMT, OR RCL CIRCUITS ON YOUR PRESENT JOB.
D 186 D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.
D 187 D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.
D 188 D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.
D 189 D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.
D 190 D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS.
D 191 D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.
D 192 D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.
D 193 D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.
D 194 D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.
D 195 D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS.
D 196 D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.
D 197 D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.
D 198 D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.
D 199 D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.

GP SPC SPC
0017 024 025

14 11 19

24 26 26

34 23 47

5 3 7

11 11 12

14 9 22

19 11 28

25 23 30

12 9 16

12 9 16

75 71 79

16 9 19

10 6 12

16 11 19

16 11 19

14 9 19

42 40 47

27 23 40

27 23 30

29 26 33

18 4 26

16 14 16

51 40 60

64 54 72

53 40 63

MODULE 7 - ELECTRICITY
MODULE 8 - MAGNETISM
MODULE 9 - SERVO-MOTORS
MODULE 10 - ELECTRICAL
MODULE 11 - ELECTRONICS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XG 30230 10270

DI-TSK		GP	SPC	SPC
		0017	024	025
D 200	01-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS.	60	59	67
D 201	01-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS.	36	23	47
D 202	01-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS.	51	40	60
D 203	01-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS.	22	14	28
D 204	01-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	52	43	58
D 205	01-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS: SINE OF AN ANGLE = OPPOSITE SIDE / HYPOTENUSE, COSINE OF AN ANGLE = ADJACENT SIDE / HYPOTENUSE, TANGENT OF AN ANGLE = OPPOSITE SIDE / ADJACENT SIDE, SECANT OF AN ANGLE = HYPOTENUSE / ADJACENT SIDE, COSECANT OF AN ANGLE = HYPOTENUSE / OPPOSITE SIDE, COTANGENT OF AN ANGLE = ADJACENT SIDE / OPPOSITE SIDE, COSECANT OF AN ANGLE = HYPOTENUSE / OPPOSITE SIDE.	10	3	14
D 206	01-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS.	7	6	9
D 207	01-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS.	13	11	12
D 208	01-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS.	6	0	7
D 209	01-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS.	12	11	9
D 210	01-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS.	5	3	5
D 211	01-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS.	6	0	9
D 212	01-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS.	10	6	12
D 213	01-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS.	6	0	9
D 214	01-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS.	10	6	12
D 215	01-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS.	4	0	5
D 216	01-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD.	8	9	7
D 217	01-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW.	8	9	7
D 218	01-34 DO YOU CHECK CAPACITORS USING OHMMETERS.	64	67	63
D 219	01-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION.	45	37	51
D 220	01-36 DO YOU CHECK INDUCTORS USING OHMMETERS.	59	63	60
D 221	01-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION.	36	29	44
D 222	01-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT $\theta = \theta_L - \theta_C$, $\theta = \theta_C - \theta_L$, AND $\theta = 0$ FOR RESONANT CIRCUITS.	4	3	5
D 223	01-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS.	19	11	23
D 224	01-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT FREQUENCY.	28	17	35

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING40-INTENDANCE
308 32500 30870

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GP SPC SPC
0017 024 025

D 225 01-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT
D 226 01-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK
D 227 01-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q.
D 228 01-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT
D 229 02-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR
D 230 02-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS.
D 231 02-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE.
D 232 02-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS.
D 233 02-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE
D 234 02-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS.
D 235 02-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A
D 236 02-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT
D 237 02-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND
D 238 02-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE 10H
D 239 03-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS ON YOUR PRESENT JOB.
D 240 03-02 DO YOU INSPECT FILTER CIRCUITS.
D 241 03-03 DO YOU CLEAN FILTER CIRCUITS.
D 242 03-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS.
D 243 03-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.
D 244 03-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER CIRCUITS.
D 245 03-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT.

MODULE ON - JERRY'S RELEVANT

MODULE ON - JERRY'S RELEVANT

MODULE ON - JERRY'S RELEVANT

MODULE ON - JERRY'S RELEVANT

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870

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GP SPC SPC
0017 024 026

D 246 03-08 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	61	71	56
D 247 03-09 DO YOU WORK ON LOW PASS FILTERS.	72	66	79
D 248 03-10 DO YOU WORK ON HIGH PASS FILTERS.	71	69	77
D 249 03-11 DO YOU WORK ON BANDPASS FILTERS.	82	83	84
D 251 03-13 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	48	37	58
D 250 03-12 DO YOU WORK ON BAND-REJECT FILTERS.	7	1	5
D 252 03-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATIONS.	58	46	78
D 253 03-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATIONS.	59	51	65
D 254 03-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATIONS.	61	57	67
D 255 03-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	20	34	9
D 256 03-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	52	40	63
D 257 03-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	57	46	65
D 258 03-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	48	34	60
D 259 03-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	25	40	14
D 260 03-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	11	6	12
E 261 E1-01 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT JOB.	86	89	86
E 262 E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	83	80	88
E 263 E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	69	54	81
E 264 E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	80	71	88
E 265 E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE RC COUPLING FUNCTIONS.	66	71	65
E 266 E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE IMPEDANCE COUPLING FUNCTIONS.	53	49	58
E 267 E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE TRANSFORMER COUPLING FUNCTIONS.	61	63	63
E 268 E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS.	73	74	74
E 269 E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS.	70	63	77
E 270 E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS.	55	43	65
E 271 E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS.	66	57	74
E 272 E1-12 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUIT.	11	20	5

MODULE 28 - COUPLING

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308XG 30830 30877

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GP SPC SPC
0017 024 025

E 273 E2-01 ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.
 E 274 E2-02 DO YOU SELECT TYPE OF SOLDER TO USE.
 E 275 E2-03 DO YOU ADD FLUX TO CONNECTIONS.
 E 276 E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS.
 E 277 E2-05 DO YOU STRIP INSULATION FROM WIRES.
 E 278 E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS.
 E 279 E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS.
 E 280 E2-08 DO YOU CUT WIRES.
 E 281 E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS.
 E 282 E2-10 DO YOU TIN SOLDERING IRON TIPS.
 E 283 E2-11 DO YOU CLEAN SOLDERING IRON TIPS.
 E 284 E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.
 E 285 E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS.
 E 286 E2-14 DO YOU INSPECT SOLDERED CONNECTIONS.
 E 287 E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING.
 E 288 E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.
 E 289 E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.
 E 290 E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL.
 E 291 E2-19 DO YOU MAKE HARDWARE TURRET CONNECTIONS.
 E 292 E2-20 DO YOU MAKE HARDWARE BIFURCATED CONNECTIONS.
 E 293 E2-21 DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.
 E 294 E2-22 DO YOU MAKE PRINTED CIRCUIT BOARD BIFURCATED CONNECTIONS.
 E 295 E2-23 DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.
 E 296 E2-24 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.
 E 297 E2-25 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.
 E 298 E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.
 E 299 E3-02 DO YOU ADJUST RELAYS.
 E 300 E3-03 DO YOU CLEAN RELAYS.
 E 301 E3-04 DO YOU INSPECT RELAYS.
 E 302 E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAY.
 E 303 E3-06 DO YOU REMOVE OR REPLACE PARTS OF RELAY.
 E 304 E3-07 DO YOU TROUBLESHOOT RELAYS.
 E 305 E3-08 DO YOU STRAIGHTEN RELAY CONTACTS.
 E 306 E3-09 DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.
 E 307 E3-10 DO YOU PERFORM ANY TASKS ON RELAY CORE.
 E 308 E3-11 DO YOU PERFORM ANY TASKS ON RELAY COIL.
 E 309 E3-12 DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.
 E 310 E3-13 DO YOU PERFORM ANY TASKS ON RELAY SPRING.
 E 311 E3-14 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPEN (NO) SCHEMATIC SYMBOLS

MODULE 76 - SOLDERING TOOLS AND MATERIALS

MODULE 77 - SOLDERING AND DESOLDERING PROCEDURE

MODULE 16 - RELAYS

86 89 84
 73 80 70
 72 86 63
 81 84 77
 84 91 79
 82 86 79
 84 91 79
 83 89 79
 77 77 67
 82 86 79
 82 86 79
 81 89 77
 83 89 79
 86 89 84
 77 89 67
 76 74 77
 76 77 77
 25 17 33
 59 43 56
 42 49 37
 70 71 67
 49 57 42
 71 74 67
 83 89 79
 84 91 79
 95 97 93
 36 37 37
 44 77 58
 76 86 74
 80 89 72
 19 14 23
 72 89 45
 93 51 40
 43 49 40
 5 6 5
 8 14 5
 10 11 7
 17 17 16
 88 86 91

PCT MEMBERS ANSWERS YES FOR MAINT DEFENSE GPS

GPS UNIT PAGE 43

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XO 30830 30870

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GP SPC SPC
D017 024 028

E 312 E3-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE
THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS
E 313 E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE
THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.
E 314 E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE
THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.
E 315 E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS
SCHEMATIC SYMBOLS FOR RELAYS.
E 316 E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS
BY MEASURING RESISTANCE.
F 317 F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH
MICROPHONES.
F 318 F1-02 DO YOU INSPECT MICROPHONES.
F 319 F1-03 DO YOU CLEAN MICROPHONES.
F 320 F1-04 DO YOU OPERATE (HAVE A JOB IN WHICH YOU USE
MICROPHONES).
F 321 F1-05 DO YOU TROUBLESHOOT MICROPHONES AS FAR AS CHECKING
WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO
F 322 F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES
COMPONENTS.
F 323 F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.
F 324 F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.
F 325 F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.
F 326 F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES.
F 327 F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.
F 328 F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.
F 329 F1-13 DO YOU PERFORM TASKS ON VELOCITY MICROPHONE
MICROPHONES.
F 330 F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH
SPEAKERS, SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.
F 331 F2-02 DO YOU INSPECT SPEAKERS.
F 332 F2-03 DO YOU CLEAN SPEAKERS.
F 333 F2-04 DO YOU OPERATE (HAVE A JOB IN WHICH SPEAKERS ARE
USED).
F 334 F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING
WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO
F 335 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.
F 336 F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.
F 337 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.
F 338 F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER
COILS.
F 339 F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER
SPIDERS.
F 340 F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER
FIELD COILS.

MODULE 17 - MICROPHONE AND SPEAKERS

98 37 60

18 9 26

12 9 16

28 20 35

20 11 28

12 6 16

25 11 37

2 3 2

2 0 2

0 0 0

1 0 0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30840 30830 30820

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GP SPC SPC
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F 341 F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS.	2	0	2
F 342 F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS.	2	0	2
F 343 F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS.	2	0	2
F 344 F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES.	1	0	2
F 345 F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB.	84	86	84
F 346 F3-02 DO YOU USE AN OSCILLOSCOPE TO PERFORM OPERATIONAL CHECKS.	87	94	84
F 347 F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS.	81	89	79
F 348 F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS.	82	91	77
F 349 F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY.	75	89	70
F 350 F3-06 DO YOU USE AN OSCILLOSCOPE TO MEASURE TIME.	72	77	74
F 351 F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE LISSAJOUS PATTERNS.	31	34	33
F 352 F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES.	70	89	74
F 353 F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER.	59	63	60
F 354 F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE.	77	89	74
F 355 F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL.	64	63	72
G 356 G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES ON YOUR PRESENT JOB.	95	94	95
G 357 G1-02 DO YOU INSPECT DIODES.	77	80	79
G 358 G1-03 DO YOU REMOVE OR REPLACE DIODES.	81	83	79
G 359 G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT.	82	83	81
G 360 G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES.	8	9	9
G 361 G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE FOR DIODES.	10	6	12
G 362 G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE	13	9	16
G 363 G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE.	67	60	74
G 364 G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS.	70	77	79
G 365 G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW.	11	6	16

MODULE 29 - PN JUNCTIONS AND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
30240 30830 30870

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GP SPC SPC
0017 024 025

G 366 61-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD
 BIAS RESISTANCE. 69 49 72
 G 367 61-12 DO YOU USE OR REFER TO DIODE COLOR CODING. 51 31 45
 G 368 61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN
 ELECTRON IN ORBIT AROUND A NUCLEUS. 0 0 0
 G 369 61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN
 ELECTRON IN ORBIT AROUND A NUCLEUS. 0 0 0
 G 370 61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM,
 SUCH AS IN 536. 75 66 81
 G 371 61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN
 ELECTRON MOVING IN ORBIT. 0 0 0
 G 372 61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN
 ELECTRON MOVING IN ORBIT. 0 0 0
 G 373 61-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE
 BIAS RESISTANCE. 66 60 72
 G 374 61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A
 PARTICULAR SHELL OR ORBIT. 2 0 5
 G 375 61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS
 OF AN ORBITING ELECTRON. 0 0 0
 G 376 61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF
 AN ORBITING ELECTRON. 0 0 0
 G 377 61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE
 IN THE OUTERMOST SHELL). 4 0 7
 G 378 61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL
 NUMBER OF ELECTRONS IN ATOM). 4 0 7
 G 379 61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH
 INDICATE THE CATHODE END. 71 60 77
 G 380 61-25 DO YOU USED TO KNOW WHICH MATERIALS ARE USED IN
 THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR
 46 43 49
 G 381 61-26 IS IT IMPORTANT FOR YOU TO KNOW THAT
 SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS
 G 382 61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE
 CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT
 G 383 61-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS
 FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR
 20 6 33
 G 384 61-29 DO YOU USE OR REFER TO VALENCE BAND IN
 SEMICONDUCTOR MATERIALS. 78 77 84
 G 385 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN
 SEMICONDUCTOR MATERIALS. 2 0 5
 G 386 61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN
 SEMICONDUCTOR MATERIALS. 2 0 5

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
2061 3150 30270

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GP SPC SPC
0017 024 025

6 387 61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS. 1 0 2

6 388 61-33 DO YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS. 4 6 2

6 389 61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS. 10 6 14

6 390 61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS. 1 0 2

6 391 61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS. 1 0 2

6 392 61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL. 24 23 37

6 393 61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL. 29 23 37

6 394 61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS. 7 3 12

6 395 61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS. 7 3 12

6 396 61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS. 2 3 2

6 397 61-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS. 14 9 21

6 398 61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL. 11 6 14

6 399 61-44 DO YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES. 72 69 74

6 400 61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS. 1 3 2

6 401 61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION. 67 49 79

6 402 61-47 DO YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING. 39 23 49

6 403 61-48 DO YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING. 31 20 37

6 404 61-49 DO YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING. 35 14 49

6 405 61-50 DO YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING. 47 31 58

6 406 62-01 DO YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB. 98 100 95

6 407 62-02 DO YOU INSPECT TRANSISTORS. 61 89 79

6 408 62-03 DO YOU REMOVE OR REPLACE TRANSISTORS. 84 91 79

6 409 62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT. 84 89 81

6 410 62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS. 87 91 84

6 411 62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS. 87 91 84

6 412 62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS. 86 89 84

MODULE 30 - Transistors

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 3087C

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GP SPC SPC
0017 024 025

6 913 62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.

6 914 62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.

6 915 62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).

6 916 62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.

6 917 62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.

6 918 62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS Q1, Q2, Q3, ETC.

6 919 62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.

6 920 62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IS NORMALLY SIGNIFICANTLY LARGER THAN THE EMITTER BASE CURRENT IS THE

6 921 62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE

6 922 62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES.

6 923 62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.

6 924 62-19 DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.

6 925 62-20 DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.

6 926 62-21 DO YOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.

6 927 62-22 DO YOU CALCULATE THE BETA TRANSISTOR GAINS.

6 928 62-23 DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.

6 929 62-24 DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.

6 930 62-25 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.

6 931 63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS.

6 932 63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS.

6 933 63-04 DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.

6 934 63-05 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTOR AMPLIFIERS.

6 935 63-06 DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIERS.

6 936 63-07 DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.

6 937 63-08 DO YOU USE OR REFER TO COMMON EMITTER THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN

MODULE 31 - AMPLIFIER PRINCIPLES
MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS

72 83 67
45 49 47
45 71 43
74 80 77
57 49 49
73 80 72
93 34 51

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 5000

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6 438 63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 439 63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE
IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN
6 440 63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 441 63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE
IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL.
6 442 63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 443 63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER,
DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS
6 444 63-15 DO YOU USE OR REFER TO THE OPERATING POINT &
(QUIESCENT POINT) FOR A TRANSISTOR.
6 445 63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A
PARTICULAR TRANSISTOR.
6 446 63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).
6 447 63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).
6 448 63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).
6 449 63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE
6 450 63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE
6 451 63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY
6 452 63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT
IS GENERATED WITH LESS COLLECTOR VOLTAGE AS
6 453 63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF
A TRANSISTOR AT DIFFERENT TEMPERATURES.

GP SPC SPC
0017 024 025

11 11 9
41 37 44
8 9 7
37 31 42
7 9 5
9 3 7
19 14 23
5 0 7
51 57 49
24 26 26
25 29 23
11 6 12
8 3 12
6 3 9
14 3 26
4 3 5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
3087C 3083C 30870

GP SPC SPC
0017 024 025

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6 454 63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 455 63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 456 63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 457 63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 458 63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 459 63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE
TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED
6 460 63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE EMITTER (SWAMPING) RESISTOR
6 461 63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS
6 462 63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS
6 463 63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION
6 464 63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION
6 465 63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS
WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS
6 466 63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR
TRANSISTOR CIRCUITS
6 467 63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND
THE CAUSE OF AMPLITUDE DISTORTION
6 468 63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR
TRANSISTOR CIRCUITS
6 469 63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND
THE CAUSE OF AMPLITUDE DISTORTION
6 470 63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR
CIRCUITS
6 471 63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND
THE CAUSES OF PHASE DISTORTION
6 472 63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR
TRANSISTOR CIRCUITS

52 49 54
45 37 51
43 31 53
46 37 53
45 34 53
39 31 44
49 46 56
43 34 53
40 29 51
42 37 51
44 40 53
35 26 49
63 54 72
60 57 67
53 49 58
55 54 60
37 26 51
36 26 49
60 51 70

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
32010 20830 30810

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	GP	SPC	SPC
	0017	024	025
6 473 G3-44 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	55	49	45
6 474 G3-45 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	46	34	56
6 475 G3-46 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	45	31	58
6 476 G3-47 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	35	26	47
6 477 G3-48 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	34	23	47
6 478 G3-49 THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO IN THE COMMON COLLECTOR CONFIGURATION.	20	11	26
6 479 G3-50 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.	24	14	30
6 480 G3-51 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.	34	26	44
6 481 G3-52 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.	59	60	63
6 482 G3-53 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS.	43	37	51
6 483 G3-54 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.	31	20	44
6 484 G3-55 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.	58	54	65
6 485 H1-01 DO YOU USE OR REFER TO VARACTORS.	77	66	86
6 486 H1-02 DO YOU USE OR REFER TO TUNNEL DIODES.	65	54	77
6 487 H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET).	80	69	93
6 488 H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.	65	51	79
6 489 H1-05 DO YOU USE OR REFER TO ZENER DIODES.	78	94	100
6 490 H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS.	94	86	100
6 491 H2-01 ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.	94	94	93
6 492 H2-02 DO YOU INSPECT POWER SUPPLIES.	81	89	79
6 493 H2-03 DO YOU CLEAN POWER SUPPLIES.	75	89	70
6 494 H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES.	80	89	77
6 495 H2-05 DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.	75	80	70
6 496 H2-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.	78	80	79
6 497 H2-07 DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.	69	80	63
6 498 H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY PARTS.	76	77	74
6 499 H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS.	80	74	88
6 500 H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.	82	80	88

MODULE 12 - SELECTED SOLID STATE DEVICES

MODULE 34 - SOLID STATE POWER RECTIFIERS AND FILTERS

MODULE 35 - SOLID STATE POWER SUPPLY REGULATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870

DI-TSK

GP SPC SPC
Q017 Q24 Q25

M 501 M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.	88	86	93
M 502 M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.	43	37	51
M 503 M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.	94	91	95
M 504 M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.	73	69	84
M 505 M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.	93	83	84
M 506 M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.	77	69	81
M 507 M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.	80	74	84
M 508 M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.	72	63	79
M 509 M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.	47	40	53
M 510 M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.	75	69	79
M 511 M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.	73	63	84
M 512 M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.	72	63	81
M 513 M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.	60	46	72
M 514 M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.	49	37	60
M 515 M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.	49	37	60
M 516 M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.	57	49	63
M 517 M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.	58	46	67
M 518 M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHAT TYPE OF FILTER.	30	47	16
M 519 M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.	10	3	16
M 520 M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.	87	86	88
M 521 M3-02 DO YOU INSPECT OSCILLATORS.	72	80	70
M 522 M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.	71	74	72
M 523 M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.	63	74	58
M 524 M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.	66	69	67
M 525 M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.	67	77	65
M 526 M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.	67	71	67
M 527 M3-08 DO YOU USE OR REFER TO FEEDBACK.	75	74	79
M 528 M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FOOT).	84	83	67
M 529 M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.	55	40	67
M 530 M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.	71	57	84
M 531 M3-12 DO YOU USE OR REFER TO DAMPING.	91	26	83
M 532 M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.	65	63	70

MODULE 42 - PRINCIPLES OF OSCILLATORS
MODULE 43 - SOLID STATE LC OSCILLATORS
MODULE 44 - SOLID STATE RC OSCILLATORS
MODULE 46 - SOLID STATE PULSED AND BLOCKING OSCILLATORS

PC7 MBR5 ANSWR6 YES FOR MAINT DAFSC GPS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30870 30870 30870

DT-TSK

	GP	SPC	SPC
	0017	U24	025
M 533 M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.	23	26	21
M 534 M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.	20	14	26
M 535 M3-16 DO YOU USE OR REFER TO UNDER DAMPING.	19	11	26
M 536 M3-17 DO YOU USE OR REFER TO OVER DAMPING.	20	11	26
M 537 M3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FOD.	59	51	67
M 538 M3-19 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FOD.	53	43	63
M 539 M3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FOD.	70	57	81
M 540 M3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FOD.	16	24	5
M 541 M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS.	23	9	30
M 542 M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS.	22	11	26
M 543 M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.	29	14	37
M 544 M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.	14	11	19
M 545 M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.	12	3	16
M 546 M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF SINUSOIDAL OSCILLATORS.	55	46	49
M 547 11-01 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT JOB.	81	80	84
M 548 11-02 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.	61	60	67
M 549 11-03 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING CIRCUITS.	54	51	60
M 550 11-04 DO YOU CALIBRATE WAVE SHAPING OR GENERATING CIRCUITS.	47	43	53
M 551 11-05 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR GENERATING CIRCUITS.	61	66	63
M 552 11-06 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE WAVE SHAPING OR GENERATING CIRCUITS.	60	60	65
M 553 11-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR GENERATING CIRCUITS.	58	60	60
M 554 11-08 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE SHAPING OR GENERATING CIRCUITS.	61	60	67
M 555 11-09 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FOD.	43	34	51
M 556 11-10 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FOD.	48	34	60
M 557 11-11 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FOD.	64	54	74
M 558 11-12 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FOD.	11	20	5
M 559 11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.	63	60	67
M 560 11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.	67	63	74
M 561 11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.	66	63	72
M 562 11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF MULTIVIBRATORS.	12	20	7

MODULE 47 - SOLID STATE ELECTRONICS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870GP SPC SPC
0017 024 025

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Task ID	Description	GP	SPC	SPC	Module
		0017	024	025	
1 563 12-01 00	YOU WORK WITH LIMITERS OR CLAMPERS ON YOUR PRESENT JOB.	71	63	81	
1 564 12-02 00	YOU WORK WITH SERIES DIODE LIMITERS.	47	31	63	
1 565 12-03 00	YOU WORK WITH SHUNT DIODE LIMITERS.	44	31	67	
1 566 12-04 00	YOU WORK WITH LIMITERS WITH BIAS.	37	26	47	
1 567 12-05 00	YOU WORK WITH ZENER DIODE LIMITERS.	50	43	72	
1 568 12-06 00	YOU WORK WITH TRANSISTOR LIMITERS.	54	34	72	
1 569 12-07 00	YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITER.	12	20	7	
1 570 12-08 00	YOU WORK WITH DIODE CLAMPERS.	51	34	67	
1 571 12-09 00	YOU WORK WITH DIODE CLAMPERS WITH BIAS.	40	34	44	
1 572 12-10 00	YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPER.	18	29	12	
1 573 13-01 00	FOR PURPOSES OF THIS QUESTION DO NOT CONSIDER HIGH FREQUENCY DEVICES, SUCH AS KLYSTRONS, TRAVELING WAVE TUBES TO SEE IF THEY ARE	37	20	49	
1 574 13-02 00	GOOD OR NOT.	29	17	33	
1 575 13-03 00	YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING TUBE TESTERS.	23	11	26	
1 576 13-04 00	YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING MULTIMETERS.	3	9	7	
1 577 13-05 00	YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SCOPES.	10	4	12	
1 578 13-06 00	YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SUBSTITUTION.	25	17	28	
1 579 13-07 00	YOU USE OR REFER TO CUTOFF.	11	3	19	
1 580 13-08 00	YOU USE OR REFER TO INVERSE VOLTAGE RATING.	4	3	5	
1 581 13-09 00	YOU USE OR REFER TO PEAK CURRENT RATING.	4	3	5	
1 582 13-10 00	YOU USE OR REFER TO TRANSIT TIME.	1	0	2	
1 583 13-11 00	YOU USE OR REFER TO PLATE DISSIPATION RATING.	4	0	9	
1 584 13-12 00	YOU USE OR REFER TO SATURATION.	10	3	14	
1 585 13-13 00	YOU USE OR REFER TO DC PLATE RESISTANCE.	4	0	5	
1 586 13-14 00	YOU COMPUTE THE ACTUAL VALUE OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES.	1	0	0	
1 587 13-15 00	YOU USE OR REFER TO PLATE VOLTAGE.	28	11	37	
1 588 13-16 00	YOU USE OR REFER TO PLATE CURRENT.	22	9	28	
1 589 13-17 00	YOU USE OR REFER TO GRID VOLTAGE.	29	11	40	
1 590 13-18 00	YOU USE OR REFER TO GRID CURRENT.	22	9	28	
1 591 13-19 00	YOU USE OR REFER TO CATHODE VOLTAGE.	27	14	33	
1 592 13-20 00	YOU USE OR REFER TO CATHODE CURRENT.	19	11	21	
1 593 13-21 00	THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN	5	0	7	
1 594 13-22 00	YOU CALCULATE THE ACTUAL VALUE OF THE TRIODE AMPLIFICATION FACTOR.	1	3	0	

MODULE 50 - SOLID STATE LIMITERS AND CLAMPERS

MODULE 56 - ELECTRON TUBE CHARACTERISTICS AND DIODES

MODULE 57 - TRIODES

MODULE 58 - MULTIGRID ELECTRON TUBES

PCT MBR'S ANSWR YES FOR MAINT DAFSC GPS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
J04Y0 30830 30870

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GP SPC SPC
0017 024 025

1 595 13-23 DO YOU USE OR REFER TO MULTIGRID (TETROD, PENTODE, ETC.) AMPLIFICATION FACTORS.	1	0	0
1 596 13-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSDUCANCE (G, WHICH IS MEASURED IN MHOS).	4	0	5
1 597 13-25 DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON TUBE TRANSDUCANCE.	0	0	0
1 598 13-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE.	1	0	2
1 599 13-27 DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE RESISTANCE.	0	0	0
1 600 13-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE.	6	3	5
1 601 13-29 IN YOUR WORK WITH ELECTRON TUBES DO YOU USE OR REFER TO CHARACTERISTIC CURVES.	0	0	0
1 602 13-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS.	0	0	0
1 603 13-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS.	0	0	0
1 604 13-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF.	0	0	0
1 605 13-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION.	0	0	0
1 606 13-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN.	18	6	24
1 607 13-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY.	6	3	9
1 608 13-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	13	9	12
1 609 13-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	4	3	7
1 610 13-38 DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	13	6	19
1 611 13-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
1 612 13-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES, SUCH AS INPUT CAPACITANCE, ETC.	0	0	0
1 613 13-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION.	24	11	30
1 614 13-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.	27	11	35
1 615 13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN TUBE SUBSTITUTION MATERIAL.	0	0	0
1 616 13-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL.	25	11	33
J 617 JI-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS ON YOUR PRESENT JOB.	29	9	44
J 618 JI-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT	6	3	7

MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS

MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLIFIERS AND TRIODE LIMITERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XC 30830 30870

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	GP	SPC	SPC
	0017	024	025
J 619 J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS.	8	3	14
J 620 J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	16	3	23
J 621 J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	8	3	14
J 622 J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	13	6	19
J 623 J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	6	3	9
J 624 J2-01 DO YOU WORK WITH GAS TUBES THAT CATHODE OR COLD CATHODE?	17	9	23
J 625 J2-02 DO YOU WORK WITH CATHODE RAY TUBES.	39	17	54
J 626 J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	11	9	14
J 627 J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	14	14	14
J 628 J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THERATONS.	7	9	8
J 629 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THERATONS ARE USED.	7	9	7
J 630 J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE	29	6	47
J 631 J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	27	3	44
J 632 J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	19	3	33
J 633 J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	24	6	35
J 634 J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS.	20	3	30
J 635 J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS.	13	0	21
J 636 J2-13 DO YOU USE OR REFER TO PERSISTENCE.	27	6	40
J 637 J2-14 DO YOU USE OR REFER TO DECAY TIMES.	20	3	30
J 638 J2-15 DO YOU USE OR REFER TO FLUORESCENCES.	12	3	14
J 639 J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	19	6	26
J 640 J2-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	70	46	77
J 641 J3-02 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	50	54	63
J 642 J3-03 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	59	54	68
J 643 J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	57	46	67
J 644 J3-05 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	19	17	21
J 645 J3-06 DO YOU PERFORM ANY TASKS ON REGULATED OSCILLATORS.	15	37	53
J 646 J3-07 DO YOU WORK ON A TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	37	50	58

MODULE 59 - SPECIAL PURPOSE ELECTRON TUBES

MODULE 63 - HETERODYNING

MODULE 64 - MODULATION

MODULE 65 - DEMODULATION

PCT MEMS ANSWERS YES FOR MAINT DAY2C EPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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MAINTENANCE
30870 30830 30870

DT-TSK

K 647 KI-02 DO YOU INSPECT AM SYSTEMS.
K 648 KI-03 DO YOU CLEAN AM SYSTEMS.
K 649 KI-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.
K 650 KI-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.
K 651 KI-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.
K 652 KI-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.
K 653 KI-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.
K 654 KI-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.
K 655 KI-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.
K 656 KI-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 657 KI-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.
K 658 KI-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.
K 659 KI-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.
K 660 KI-15 DO YOU PERFORM ANY TASKS ON DETECTORS.
K 661 KI-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.
K 662 KI-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.
K 663 KI-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.
K 664 KI-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.
K 665 KI-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.
K 666 KI-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.
K 667 KI-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.
K 668 KI-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.
K 669 KI-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.
K 670 KI-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.
K 671 KI-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.
K 672 KI-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS.
K 673 KI-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.
K 674 KI-29 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.
K 675 K2-02 DO YOU INSPECT FM SYSTEMS.
K 676 K2-03 DO YOU CLEAN FM SYSTEMS.
K 677 K2-04 DO YOU ALIGN FM SYSTEMS.
K 678 K2-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.
K 679 K2-06 DO YOU REMOVE OR REPLACE FM COMPONENTS.
K 680 K2-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.
K 681 K2-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.
K 682 K2-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 683 K2-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.
K 684 K2-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).

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19 14 21

29 20 35

28 20 33

17 9 21

17 11 19

4 0 7

8 6 12

17 9 26

10 9 9

22 14 26

25 9 40

67 54 77

59 54 66

53 51 58

54 54 58

54 46 63

55 19 40

49 46 51

57 51 60

31 20 37

59 54 63

49 46 51

MODULE 69 - FM SYSTEMS

MODULE 68 - AM SYSTEMS

PCT MEMS ANSWERS YES FOR MAINT DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308AG 30830 30870

0Y-TSK

GP SPC SPC
0017 024 025

K 685 K2-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.
K 686 K2-13 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.
K 687 K2-14 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.
K 688 K2-15 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.
K 689 K2-16 DO YOU PERFORM ANY TASKS ON LIMITERS.
K 690 K2-17 DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.
K 691 K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.
K 692 K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.
K 693 K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS.
K 694 K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.
K 695 K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.
K 696 K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.
K 697 K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.
K 698 K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.
K 699 K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM.
K 700 K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.
K 701 K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.
K 702 K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM.
K 703 L1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.
L 704 L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.
L 705 L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.
L 706 L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR LOGIC SYMBOLS WITH STATE INDICATORS.
L 707 L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.
L 708 L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.
L 709 L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.
L 710 L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.
L 711 L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.
L 712 L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES.
L 713 L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.
L 714 L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.

MODULE 51 - NUMBERING SYSTEMS AND
MATHEMATICAL CONCEPTS

MODULE 52 - LOGIC FUNCTIONS AND
BOOLEAN EQUATIONS

**TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING**

MAIN-ENANCE
308XQ 30239 3087C

GP SPC SPC
0017 024 U25

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MODULE 53 - LOGIC AND CRITICAL THINKING

L 715	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.	64	57	72
L 716	L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC	24	17	35
L 717	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.	11	5	16
L 718	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (ICML) CIRCUITS.	31	17	44
L 719	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.	54	46	65
L 720	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.	29	11	44
L 721	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.	34	14	51
L 722	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.	39	26	49
L 723	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.	16	14	19
L 724	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (ICML) CIRCUITS.	55	43	67
L 725	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.	40	31	49
L 726	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.	94	37	58
L 727	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.	60	54	67
L 728	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.	65	63	67
L 729	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS.	63	57	67
L 730	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.	65	57	72
L 731	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.	65	57	72
L 732	L2-17 DO YOU USE OR REFER TO SINGLE-SHO' MULTIVIBRATOR SYMBOLS.	66	60	72
L 733	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.	63	51	72
L 734	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.	54	46	60
L 735	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.	53	43	60
L 736	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.	57	54	60
L 737	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.	54	54	56
L 738	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.	51	46	56
L 739	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.			

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DY-TSK

		4P	SPC	SPC
		0017	024	025
L 740	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS.	15	40	49
L 741	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.	52	91	95
L 742	L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.	83	77	91
L 743	L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.	77	69	86
L 744	L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.	81	71	91
L 745	L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.	70	57	81
L 746	L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.	65	57	77
L 747	L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.	75	69	84
L 748	L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.	63	51	72
L 749	L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.	78	71	84
L 750	L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.	80	77	84
L 751	L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.	59	43	72
L 752	L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTING	61	44	74
L 753	L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTER.	65	57	74
L 754	L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.	53	46	63
L 755	L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE	58	46	70
L 756	L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTER.	76	66	84
L 757	L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.	39	23	56
L 758	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE OR UP-COUNTER HAVING COMPLEMENTED FLIP-	92	31	53
L 759	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING	40	31	49
L 760	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL	47	43	53
L 761	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.	24	11	37
L 762	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.	27	14	37
L 763	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.	42	37	49
L 764	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A	51	34	65

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30870 30830 30830

0Y-TSK

GP SPC SPC
0017 024 025

M 765 M1-01 DO YOU WORK WITH SANTOOTH WAVE GENERATORS.	59	59	72
M 766 M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.	34	17	51
M 767 M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK.	33	34	33
M 768 M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK.	28	24	30
M 769 M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS.	31	24	37
M 770 M1-06 DO YOU USE OR REFER TO RISE TIME.	59	49	72
M 771 M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME.	49	43	58
M 772 M1-08 DO YOU USE OR REFER TO SLEEP TIME.	52	37	47
M 773 M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SANTOOTH WAVEFORMS.	30	23	37
M 774 M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SANTOOTH WAVEFORMS.	28	24	33
M 775 M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SANTOOTH WAVEFORMS.	34	24	42
M 776 M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SANTOOTH WAVEFORMS.	33	23	42
M 777 M2-01 DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.	84	83	88
M 778 M2-02 DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS WHILE USING SIGNAL GENERATORS.	82	80	86
M 779 M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL GENERATORS.	67	66	72
M 780 M2-04 DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.	58	51	65
M 781 M2-05 DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.	53	43	67
M 782 M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS.	53	49	58
M 783 M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.	54	46	60
M 784 M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.	61	60	65
M 785 M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.	66	51	60
M 786 M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS.	47	37	58
M 787 M3-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	75	71	79
M 788 M3-02 DO YOU INSPECT MOTORS.	70	71	72
M 789 M3-03 DO YOU CLEAN OR LUBRICATE MOTORS.	61	49	60
M 790 M3-04 DO YOU OPERATE MOTORS.	53	57	53
M 791 M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS.	60	60	65
M 792 M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS.	42	46	42
M 793 M3-07 DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	31	34	33
M 794 M3-08 DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.	37	40	37

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308XO 3083C 3087C

DY-75K

GP SPC SPC
0017 024 025

M 795 M3-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	16	14	16
M 796 M3-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	16	14	21
M 797 M3-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ROTORS.	29	20	28
M 798 M3-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	47	51	47
M 799 M3-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	22	17	26
M 800 M3-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	22	23	21
M 801 M3-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	14	14	14
M 802 M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	7	3	9
M 803 M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	18	14	23
M 804 M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	6	3	9
M 805 M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS.	37	31	42
M 806 M3-20 DO YOU WORK WITH INDUCTION MOTORS.	34	31	35
M 807 M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS.	19	17	19
M 808 M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS.	27	26	30
M 809 M3-23 DO YOU INSPECT GENERATORS.	27	23	30
M 810 M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS.	20	20	23
M 811 M3-25 DO YOU OPERATE GENERATORS.	19	17	23
M 812 M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	11	9	14
M 813 M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS.	8	6	12
M 814 M3-28 DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO PARTS.	5	9	2
M 815 M3-29 DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	10	6	14
M 816 M1-01 DO YOU WORK WITH METERS ON YOUR PRESENT JOB.	51	53	56
M 817 M1-02 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER PERMANENT MAGNETS.	20	6	33
M 818 M1-03 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER MOVING COILS.	24	9	37
M 819 M1-04 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER SPIRAL SPRINGS.	19	6	30
M 820 M1-05 DO YOU READ METER SCALES.	76	80	79
M 821 M1-06 DO YOU EXTEND THE RANGE OF AMMETERS.	39	31	49
M 822 M1-07 DO YOU ZERO OHMMETERS.	77	83	79
M 823 M1-08 DO YOU ZERO AMMETERS.	51	51	53
M 824 M1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS.	41	34	51

MODULE 18 - METER MOVEMENTS AND CIRCUITS

PCT HURS ANSHR6 YES FOR MAINT DAPSC WPS

WPSUM7 PAGE 02

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30630 30870

DY-TSK

WP SPC SPC
0017 D24 D25

		MODULE 40 - SATURABLE REACTORS MAGNETIC AMPLIFIERS		MODULE 48 - SOLID STATE SAWTOOTH TORS		MODULE 49 - SOLID STATE REPEATING GENERATORS	
		41	34	49			
N 826	M1-10 DO YOU USE OR REFER TO VOLT-METER SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	14	11	16			
N 826	M2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	4	9	9			
N 827	M2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	6	6	7			
N 828	M2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	6	6	7			
N 829	M2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	6	6	7			
N 830	M2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	6	6	12			
N 831	M2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	8	6	12			
N 832	M2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS ON SATURABLE REACTORS COMPONENTS.	8	9	9			
N 833	M2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS.	6	6	7			
N 834	M2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD.	5	3	5			
N 835	M2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	7	3	9			
N 837	M2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	1	0	0			
N 838	M2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	4	3	2			
N 839	M2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	1	0	0			
N 840	M2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	5	0	7			
N 841	M2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	6	0	9			
N 842	M3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	66	69	70			
N 843	M3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	33	26	40			
N 844	M3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	50	57	63			
N 845	M3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	47	51	47			
N 846	M3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	40	51	49			
N 847	M3-06 DO YOU USE OR REFER TO DIFFERENTIATION CIRCUITS.	52	46	60			
N 848	M3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	57	51	45			
N 849	M3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.	33	23	42			

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 3087C

DY-TSK

GP SPC SPC
0017 028 028

M 850 M3-09 00	YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME	25	14	78
M 851 M3-10 00	YOU WORK WITH SQUARE WAVE GENERATORS.	59	51	70
M 852 M3-11 00	YOU WORK WITH RECTANGULAR WAVE GENERATORS.	39	29	49
M 853 01-01 00	YOU WORK ON SINGLE SIDEBAND SYSTEMS ON YOUR PRESENT JOB.	2	3	2
O 854 01-02 00	YOU INSPECT SSB SYSTEMS.	1	3	0
O 855 01-03 00	YOU CLEAN SSB SYSTEMS.	1	3	0
O 856 01-04 00	YOU ALIGN SSB SYSTEMS.	1	3	0
O 857 01-05 00	YOU TROUBLESHOOT TO SSB SYSTEMS.	1	3	0
O 858 01-06 00	YOU TROUBLESHOOT TO SSB COMPONENTS.	1	3	0
O 859 01-07 00	YOU REMOVE OR REPLACE SSB SYSTEMS.	1	3	0
O 860 01-08 00	YOU REMOVE OR REPLACE SSB COMPONENTS.	1	3	0
O 861 01-09 00	YOU PERFORM ANY TASKS ON SSB AUDIO AMPLIFIERS.	1	3	0
O 862 01-10 00	YOU PERFORM ANY TASKS ON SSB BALANCED MODULATORS.	1	3	0
O 863 01-11 00	YOU PERFORM ANY TASKS ON SSB CARRIER OSCILLATORS.	0	0	0
O 864 01-12 00	YOU PERFORM ANY TASKS ON SSB LC FILTERS.	1	3	0
O 865 01-13 00	YOU PERFORM ANY TASKS ON SSB CRYSTAL FILTERS.	1	3	0
O 866 01-14 00	YOU PERFORM ANY TASKS ON SSB MECHANICAL FILTERS.	0	0	0
O 867 01-15 00	YOU PERFORM ANY TASKS ON SSB OSCILLATORS.	1	3	0
O 868 01-16 00	YOU PERFORM ANY TASKS ON SSB MIXERS.	1	3	0
O 869 01-17 00	YOU PERFORM ANY TASKS ON SSB DRIVERS.	1	3	0
O 870 01-18 00	YOU PERFORM ANY TASKS ON SSB POWER AMPLIFIERS.	1	3	0
O 871 01-19 00	YOU PERFORM ANY TASKS ON SSB RF AMPLIFIERS.	1	3	0
O 872 01-20 00	YOU PERFORM ANY TASKS ON SSB FREQUENCY CONVERTERS.	1	3	0
O 873 01-21 00	YOU PERFORM ANY TASKS ON SSB IF AMPLIFIERS.	1	3	0
O 874 01-22 00	YOU PERFORM ANY TASKS ON SSB DEMODULATORS.	1	3	0
O 875 01-23 00	YOU PERFORM ANY TASKS ON SSB DON'T REMEMBER WHICH SYSTEM STAGES.	0	0	0
O 876 01-24 00	YOU USE OR REFER TO SELECTIVE FADING.	0	0	0
O 877 01-25 00	YOU USE OR REFER TO PEAK POWER.	0	0	0
O 878 01-26 00	YOU USE OR REFER TO FREQUENCY STABILITY.	1	3	0
O 879 01-27 00	YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS.	0	0	0
O 880 01-28 00	YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS.	1	3	0
O 881 01-29 00	YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS.	2	0	5
O 882 01-30 00	YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS.	2	0	5
O 883 02-01 00	YOU WORK ON PULSE MODULATION SYSTEMS ON YOUR PRESENT JOB.	60	66	56

MODULE 70 - SINGLE SIDEBAND SYSTEMS

PCT MORS ANSWERS YES FOR MAINT DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
30840 30830 30870GP SPC SPC
0017 024 025

DY-TSR

0 884 02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS.
 0 885 02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS.
 0 886 02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS.
 0 887 02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.
 0 888 02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.
 0 889 02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.
 0 890 02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.
 0 891 02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.
 0 892 02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.
 0 893 02-11 DO YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.
 0 894 02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.
 0 895 02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS.
 0 896 02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.
 0 897 02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.
 0 898 02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHORE AND CHARGING DIODES.
 0 899 02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS.
 0 900 02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.
 0 901 02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATONS.
 0 902 02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.
 0 903 02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.
 0 904 02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.
 0 905 02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.
 0 906 02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.
 0 907 02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.
 0 908 02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.
 0 909 02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.
 0 910 02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH STAGE.

MODULE 71 - PULSE MODULATION SYSTEMS

10 9 12

10 3 16

56 40 56

1 0 2

4 6 2

46 49 44

16 9 21

30 26 35

27 23 30

5 3 7

16 17 19

6 3 9

25 23 28

30 29 33

27 23 30

24 23 35

19 9 28

11 3 19

8 11 5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

6P SPC SPC
0017 024 025

0Y-TSK

0 911 02-27 00 YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	34	31	35
0 912 02-30 00 YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	34	29	37
0 913 02-31 00 YOU USE OR REFER TO PULSE WIDTH (PW).	42	40	99
0 914 02-32 00 YOU USE OR REFER TO PULSE SHAPE.	36	40	33
0 915 02-33 00 YOU USE OR REFER TO PEAK POWER.	18	20	16
0 916 02-34 00 YOU USE OR REFER TO AVERAGE POWER.	20	20	21
0 917 02-35 00 YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	14	9	16
0 918 02-36 00 YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	29	23	28
0 919 02-37 00 YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.	7	9	5
0 920 02-38 00 YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.	5	6	2
0 921 02-39 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.	23	20	26
0 922 02-40 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.	41	40	92
0 923 03-01 00 YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.	67	57	74
0 924 03-02 00 YOU INSPECT ANTENNAS.	55	57	53
0 925 03-03 00 YOU CLEAN ANTENNAS.	49	54	47
0 926 03-04 00 YOU PHYSICALLY ALIGN ANTENNAS.	19	20	21
0 927 03-05 00 YOU ELECTRICALLY ALIGN ANTENNAS.	33	31	37
0 928 03-06 00 YOU TROUBLESHOOT TO ANTENNA.	36	34	40
0 929 03-07 00 YOU TROUBLESHOOT TO ANTENNA COMPONENTS.	94	40	54
0 930 03-08 00 YOU REMOVE OR INSTALL ANTENNAS.	14	3	26
0 931 03-09 00 YOU REMOVE OR REPLACE COMPONENTS OR ANTENNAS.	36	34	42
0 932 03-10 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E (ELECTRIC FIELD) LINES.	11	6	14
0 933 03-11 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H (MAGNETIC FIELD) LINES.	11	6	14
0 934 03-12 00 YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	2	0	3
0 935 03-13 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	2	0	5
0 936 03-14 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	2	0	5
0 937 03-15 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS	2	0	5
0 938 03-16 00 YOU WORK WITH HERTZ ANTENNAS.	2	0	5
0 939 03-17 00 YOU WORK WITH MARCONI ANTENNAS.	6	0	12

MODULE 67 - ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308Y0 12830 10370

DT-TSK

GP SPC SPC
0017 024 028

0 940 03-18 00 YOU WORK WITH BROADSIDE ARRAYS.
0 941 03-19 00 YOU WORK WITH END-FIRE ARRAYS.
0 942 03-20 00 YOU WORK WITH CARDIOID ARRAYS.
0 943 03-21 00 YOU WORK WITH COLLINER ARRAYS.
0 944 03-22 00 YOU USE OR REFER TO THE TERM
ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH
0 945 03-23 00 YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF
ANTENNAS.
0 946 03-24 00 YOU USE OR REFER TO THE TERM ELECTROMAGNETIC
RADIATION FIELDS WHEN WORKING WITH ANTENNAS.
0 947 03-25 00 YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF
ANTENNAS.
0 948 03-26 00 YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC
IE AND MAGNETIC (H) COMPONENTS IN THE ANTENNA
0 949 03-27 00 YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC
(E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA
0 950 03-28 00 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY
POLARIZED.
0 951 03-29 00 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY
POLARIZED.
0 952 03-30 00 YOU MEASURE OR DETERMINE THE POLARITY OF
ANTENNAS YOU WORK ON.
0 953 03-31 00 YOU CONSTRUCT, OR MAKE THE CALCULATIONS
NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR
0 954 03-32 00 YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS.
0 955 03-33 00 YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS SERVING AS DIRECTORS.
0 956 03-34 00 YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
PARASITIC ELEMENTS SERVING AS REFLECTORS.
0 957 03-35 00 YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN
DON'T REMEMBER.
0 958 03-36 00 YOU WORK ON UNIDIRECTIONAL ANTENNAS.
0 959 03-37 00 YOU WORK ON BIDIRECTIONAL ANTENNAS.
0 960 03-38 00 YOU WORK ON DON'T REMEMBER WHICH TYPE OF
ANTENNAS.
0 961 03-39 00 YOU WORK WITH ROTAR ANTENNA ARRAYS.
P 962 PI-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS
BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS
P 963 PI-02 00 YOU REFER TO OR USE COPPER LOSS ON I R LOSS IN
TRANSMISSION LINES.

GP SPC SPC
0017 024 028

MODULE 66 - TRANSMISSION LINES

GP SPC SPC
0017 024 028

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870

DY-TSK

GP SPC SPC
0017 024 025

GP	SPC	SPC
0017	024	025
P 949	PI-02 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES.	6 6 7
P 946	PI-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES.	7 6 9
P 944	PI-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN TRANSMISSION LINES.	4 0 7
P 947	PI-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN TRANSMISSION LINES.	12 6 19
P 948	PI-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.	26 11 49
P 949	PI-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.	17 11 23
P 970	PI-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.	7 3 12
P 971	PI-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.	58 49 70
P 922	PI-11 DO YOU WORK WITH RIGID COAXIAL CABLE.	41 26 56
P 973	PI-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.	46 46 49
P 974	PI-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	2 0 5
P 975	PI-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	16 19 14
P 976	PI-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.	33 26 40
P 977	PI-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	25 29 23
P 978	PI-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	4 6 2
P 979	PI-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-WAVELENGTHS.	0 0 0
P 980	PI-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOAD USING MATCHING TRANSFORMERS.	19 14 26
P 981	PI-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING DELTA MATCHING.	2 3 2
P 982	PI-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL DATA.	6 6 7
P 983	PI-22 DO YOU REFER TO OR USE THE TERM CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES.	12 3 19
P 984	PI-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES.	1 0 2
P 985	PI-24 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES.	4 3 5
P 986	PI-25 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES.	0 0 0
P 987	PI-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.	2 3 5
P 988	PI-27 DO YOU CONSTRUCT TRANSMISSION LINES OF A PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.	2 0 5

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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MAINTENANCE
308X0 30830 30870

DY-TSK

GP SPC SPC
001/ 024 025

P 989 P1-24 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE PHYSICAL LENGTH OF A TRANSMISSION LINE REMAINS
P 990 P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES.
P 991 P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES.
P 992 P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING STUB MATCHING.
P 993 P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS ON YOUR PRESENT JOB.
P 994 P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS.
P 995 P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS.
P 996 P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS.
P 997 P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS.
P 998 P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS.
P 999 P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS.
P1000 P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS.
P1001 P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDE.
P1002 P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS.
P1003 P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS.
P1004 P2-12 DO YOU REMOVE OR INSTALL E BENDS.
P1005 P2-13 DO YOU REMOVE OR INSTALL H BENDS.
P1006 P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS.
P1007 P2-15 DO YOU REMOVE OR INSTALL CHOKES JOIN S.
P1008 P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS.
P1009 P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS.
P1010 P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS.
P1011 P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES.
P1012 P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES.
P1013 P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES.
P1014 P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES.
P1015 P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES.
P1016 P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS.
P1017 P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS.
P1018 P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS.
P1019 P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A ".8" WALL SIZE OF .7
P1020 P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST ".8" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH

MODULE 74 - WAVEGUIDES & CAVITY RESONATORS

40	46	40
37	49	33
31	40	28
2	3	2
1	0	2
22	34	14
14	26	7
35	40	35
25	37	19
35	44	30
22	26	21
16	26	9
16	26	9
10	17	5
10	14	7
16	26	9
24	29	33
22	23	23
2	0	8
2	0	5
13	14	14
5	9	2
2	3	2
1	3	0
1	3	0
1	3	0
1	0	2
1	0	2

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XC 3063C 30870

DI-TSK

GP SPC SPC
0017 024 026

P1021 P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OFF.	1	3	9
P1022 P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION.	1	0	2
P1023 P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR AND "H" LINES IN WAVEGUIDES.	1	0	2
P1024 P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" AND "H" LINES IN WAVEGUIDES.	1	0	2
P1025 P2-33 DO YOU MEASURE THE TIME PHASE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1026 P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1027 P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	12	17	9
P1028 P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	14	9	21
P1029 P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	6	6	7
P1030 P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	20	17	26
P1031 P1-39 ARE DON'T REMEMBER WHICH ENERGY COUPLING DEVICE USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	8	17	2
P1032 P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.	0	0	0
P1033 P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.	0	0	0
P1034 P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.	1	0	2
P1035 P2-43 ARE CHOKE JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	18	20	19
P1036 P2-44 ARE ROTATING JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	18	29	12
P1037 P2-45 ARE DON'T REMEMBER WHICH KIND OF JOINT USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	5	6	5
P1038 P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING.	12	9	16
P1039 P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING.	5	3	7
P1040 P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING.	5	3	7
P1041 P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER HOW.	11	17	7
P1042 P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS.	20	20	23

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

GPSUNT PAGE 22

MAINTENANCE
308X0 30830 30270

0Y-TSK

GP SPC SPC
0017 024 025

P1003 P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	54	51	56
P1044 P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE,	7	9	7
P1045 P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME,	2	3	2
P1046 P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE,	4	3	5
P1047 P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY,	10	9	9
P1048 P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTROM VELOCITY MODULATION,	11	0	21
P1049 P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING,	11	3	19
P1050 P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS,	4	3	5
P1051 P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS,	20	37	7
P1052 P3-10 DO YOU WORK WITH REFLEX KLYSTRONS,	19	11	26
P1053 P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT),	25	40	14
P1054 P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS,	30	23	37
P1055 P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS,	16	19	14
P1056 P3-14 DO YOU WORK WITH MAGNETRONS,	6	9	5
P1057 P3-15 DO YOU INSPECT TWT OR KLYSTRONS,	34	43	30
P1058 P3-16 DO YOU CLEAN TWT OR KLYSTRONS,	28	34	26
P1059 P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY,	27	31	26
P1060 P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY,	23	23	26
P1061 P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR KLYSTRONS,	33	43	28
P1062 P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS,	33	40	30
P1063 P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON ASSEMBLY,	31	37	30
P1064 P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON COMPONENTS,	25	34	21
P1065 P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS,	45	49	47
P1066 P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS,	40	43	42
P1067 P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS,	43	46	47
P1068 P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS,	45	46	47
P1069 P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS,	46	46	49
P1070 P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS,	43	46	44
P1071 P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIERS,	42	44	42
P1072 P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC AMPLIFIERS,	41	40	44
P1073 P3-31 DO YOU INSPECT MAGNETRONS,	2	4	0
P1074 P3-32 DO YOU CLEAN MAGNETRONS,	2	4	0
P1075 P3-33 DO YOU ADJUST MAGNETRONS,	2	4	0
P1076 P3-34 DO YOU TUNE MAGNETRONS,	2	4	0
P1077 P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS,	2	4	0

MODULE 75 - MICROWAVE AND OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308XC 30830 3087C

DI-73K

GP SPC SPC
0017 024 025

P1070 P3-34 DO YOU TROUBLESHOOT MAGNETRONS.	2	4	0
P1079 P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	2	4	0
P1080 P3-38 DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETRONS.	2	4	0
P1081 P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	2	3	2
P1082 P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	2	3	2
P1083 P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GRIDS.	2	3	2
P1084 P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	2	3	2
P1085 P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	2	3	2
P1086 P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GRIDS.	2	3	2
P1087 P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	2	3	2
P1088 P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS.	2	3	2
P1089 P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	2	3	2
P1090 P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES.	11	3	16
P1091 P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS.	10	3	14
P1092 P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS.	6	3	7
P1093 P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	11	3	16
P1094 P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	6	3	7
P1095 P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	10	6	12
P1096 P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	10	6	12
P1097 P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	12	9	14
P1098 P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	14	20	12
P1099 P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	13	20	9
P1100 P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GRIDS.	11	14	9
P1101 P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	13	20	9
P1102 P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELICES.	13	20	9

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870GP SPC SPC
0017 024 025

0V-TSK

P1103 P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWY COLLECTORS.	13	20	9
P1104 P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWY MAGNETS.	6	11	2
P1105 P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWY ATTENUATORS.	11	17	7
P1106 P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS.	24	17	30
P1107 P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES.	17	11	21
P1108 P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER TOLER CAVITIES.	14	6	23
P1109 P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES.	28	20	35
P1110 P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS.	13	9	14
P1111 P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES.	4	3	5
P1112 P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.	0	0	0
P1113 P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING PINS.	0	0	0
P1114 P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.	0	0	0
P1115 P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS.	0	0	0
P1116 P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT CAVITIES.	0	0	0
P1117 P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.	0	0	0
P1118 P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS.	0	0	0
Q1119 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS.	83	80	88
Q1120 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS.	86	83	91
Q1121 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT REGISTERS.	78	74	84
Q1122 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL OF STORAGE REGISTERS.	78	74	84
Q1123 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS.	83	80	91
Q1124 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE REGISTERS.	83	79	77
Q1125 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES.	87	80	77
Q1126 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB.	78	77	86
Q1127 Q2-02 DO YOU USE OR REFER TO DELAY LINES.	37	20	51
Q1128 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES.	45	31	58
Q1129 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS.	13	3	23
Q1130 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES.	54	40	70
Q1131 Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF MEMORY SYSTEMS.	39	26	51

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870

DV-TSK

	GP	SPC	SPC
	0017	024	025
R1151 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.	56	69	49
R1152 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.	53	57	53
R1153 R3-01 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.	93	23	56
R1154 R3-02 DO YOU FABRICATE COAXIAL CABLES.	59	49	65
ST1155 ST-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.	67	57	77
S1156 S1-02 DO YOU PERFORM ANY TASKS ON MIXIE LIGHTS OF MIXIE LIGHT DECODER SYSTEMS.	61	54	70
S1157 S1-03 DO YOU ANALYZE MIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.	16	6	23
ST1158 S2-01 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.	94	43	53
ST1159 S3-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.	12	9	14
S1160 S3-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.	5	6	2
S1161 S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	2
S1162 S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.	2	0	2
S1163 S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	2
S1164 S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	8	3	12
S1165 S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	8	6	9
S1166 S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	10	6	12
S1167 S3-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	7	3	9
T1168 T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.	12	0	23
T1169 T1-02 DO YOU INSPECT INFRARED SYSTEMS.	5	0	9
T1170 T1-03 DO YOU CLEAN INFRARED SYSTEMS.	4	0	7
T1171 T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.	4	0	7
T1172 T1-05 DO YOU OPERATE INFRARED SYSTEMS.	5	0	9
T1173 T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.	4	0	7
T1174 T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	4	0	7
T1175 T1-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.	5	0	9
T1176 T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	4	0	7
T1177 T1-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.	4	0	7

MODULE 78 - FABRICATE MULTI-CONDUCTOR
AND COAXIAL CABLES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DT-15K

GP SPC SPC
0017 024 025

11176 11-11 00	YOU USE OR REFER TO FAR REGION.	0	0	0	0
11177 11-12 00	YOU USE OR REFER TO INTERMEDIATE REGION.	2	0	0	5
11178 11-13 00	YOU USE OR REFER TO NEAR REGION.	4	0	0	7
11179 11-14 00	YOU USE OR REFER TO MICROMIN.	7	0	0	14
11180 11-15 00	YOU USE OR REFER TO GRAY BODIES.	4	0	0	7
11181 11-16 00	YOU USE OR REFER TO BLACK BODIES.	5	0	0	7
11182 11-17 00	YOU USE OR REFER TO ABSORPTION.	0	0	0	0
11183 11-18 00	YOU USE OR REFER TO SCATTERING.	2	0	0	5
11184 11-19 00	YOU USE OR REFER TO ABSOLUTE ZERO.	4	0	0	7
11185 11-20 00	YOU PERFORM TASKS ON SLITZ.	0	0	0	0
11186 11-21 00	YOU PERFORM TASKS ON TARGET BUTTONS.	0	0	0	0
11187 11-22 00	YOU PERFORM TASKS ON EJECTOR LENSES.	0	0	0	0
11188 11-23 00	YOU PERFORM TASKS ON OCULAR LENSES.	0	0	0	0
11189 11-24 00	YOU PERFORM TASKS ON CORRECTION LENSES.	1	0	0	2
11190 11-25 00	YOU PERFORM TASKS ON FILTERS.	2	0	0	5
11191 11-26 00	YOU PERFORM TASKS ON SPHERICAL MIRRORS.	2	0	0	5
11192 11-27 00	YOU PERFORM TASKS ON PLANE MIRRORS.	1	0	0	2
11193 11-28 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11194 11-29 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11195 11-30 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11196 12-01 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11197 12-02 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11198 12-03 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11199 12-04 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11200 12-05 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11201 12-06 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11202 12-07 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11203 12-08 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11204 12-09 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11205 12-10 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11206 12-11 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11207 12-12 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11208 12-13 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11209 12-14 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11210 12-15 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11211 12-16 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11212 12-17 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11213 12-18 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11214 12-19 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11215 12-20 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11216 12-21 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11217 12-22 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11218 12-23 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11219 12-24 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11220 12-25 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11221 12-26 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11222 12-27 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11223 12-28 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11224 12-29 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0
11225 12-30 00	YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGMAINTENANCE
308X0 30830 30870GP SPC SPC
0017 029 025

DY-TSE

T1220	T2-26	DO YOU WORK WITH HELICAL FLASMTUBES.	0	0	0	0
T1221	T2-27	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	0	0	0	0
T1222	T2-28	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0	0
T1223	T2-29	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0	0
T1224	T2-30	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH REMON.	0	0	0	0
T1225	T2-31	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH CESIUM-HELIUM.	1	0	0	2
T1226	T2-32	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0	0
T1227	T2-33	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH NEODYMIUM IN GLASS.	0	0	0	0
T1228	T2-34	DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIIDE.	1	0	0	2
T1229	T3-01	ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVS) OR MULTIPLE TUBES.	11	11	11	9
T1230	T3-02	DO YOU INSPECT DVS OR MNST.	6	9	2	2
T1231	T3-03	DO YOU CLEAN DVS OR MNST.	4	6	2	2
T1232	T3-04	DO YOU ADJUST OR CALIBRATE DVS OR MNST.	2	3	2	2
T1233	T3-05	DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVS OR MNST).	6	6	4	7
T1234	T3-06	DO YOU TROUBLESHOOT DVS OR MNST CIRCUITS.	5	6	5	5
T1235	T3-07	DO YOU REMOVE OR REPLACE THE DVS OR MNST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE).	2	6	0	0
T1236	T3-08	DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVS.	4	0	0	7
T1237	T3-09	DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF MNST.	2	0	0	5
T1238	T3-10	DO YOU PERFORM TASKS ON FLOOD GUNS.	2	0	2	2
T1239	T3-11	DO YOU PERFORM TASKS ON WRITE GUNS.	2	0	2	2
T1240	T3-12	DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0	0
T1241	T3-13	DO YOU PERFORM TASKS ON ERASE GUNS.	2	0	0	3
T1242	T3-14	DO YOU PERFORM TASKS ON STORAGE CRIDS.	2	0	2	2
T1243	U1-01	ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	33	37	30	30
U1244	U1-02	DO YOU USE OR REFER TO DECIMAL SYSTEMS.	23	17	28	28
U1245	U1-03	DO YOU USE OR REFER TO PROGRAMS.	25	20	30	30
U1246	U1-04	DO YOU USE OR REFER TO MIXED DECIMAL SYSTEMS.	19	6	21	21
U1247	U1-05	DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	12	6	16	16
U1248	U1-06	DO YOU USE OR REFER TO FOUR SYSTEMS.	2	0	8	8
U1249	U1-07	DO YOU USE OR REFER TO BINARY SYSTEMS.	29	17	30	30
U1250	U1-08	DO YOU USE OR REFER TO TIME-SHARING.	8	3	12	12

PCT WORDS ANSWERS YES FOR MAINT. DEFECT. EPS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DY-TSA

SP SPC SPC
0017 024 025

U1251 U1-09 DO YOU USE OR REFER TO DATA WORDS.
U1252 U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.
U1253 U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS.
U1254 U1-12 DO YOU USE OR REFER TO STEERING INFORMATION.
U1255 U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.
U1256 U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.
U1257 U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.
U1258 U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.
U1259 U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.
U1260 U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.
U1261 U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.
U1262 U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.
U1263 U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.
U1264 U2-01 DO YOU USE DECIBELS TO EXPRESS ATTENUATION AND ATTENUATION.
U1265 U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.
U1266 U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.
U1267 DUMMY QUESTION TO FACILITATE CHECK

24 19 33
33 34 33
20 23 19
15 11 16
18 14 21
12 11 12
5 3 5
27 29 26
24 23 26
22 17 26
23 20 26
23 20 26
22 24 26
67 69 67
11 11 7
11 11 7
0 0 0

PCI MBRS ANSWERS YES FOR OPEN DAFSC GPS

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TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE JOBXO CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	GPO009	STAGE =	4	KPATH OROLR FROM	1 TO	64	CONTAINING	64 MEMBERS.
GROUP IDENTITY =	SPC026	ALL MEMBERS OF	GPO09	WHO ARE DAFSC	30830		CONTAINING	18 MEMBERS.
GROUP IDENTITY =	SPC027	ALL MEMBERS OF	GPO09	WHO ARE DAFSC	30870		CONTAINING	36 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30870

GP 3PC SPC
0004 026 027

DUTY

		23	72	47
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	50	99	97
B	MULTIPLIER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	5	6	6
D	AC CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	0	0	0
E	COUPLING, SOLDERING, AND RELAYS	0	0	0
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	55	76	47
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	0	0	0
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	6	6	6
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	2	0	3
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, METEODYNAMIC MODULATION, AN SYSTEMS, PH SYSTEMS, AND NUMBERING SYSTEMS	67	36	76
K	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	2	0	0
L	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	11	22	6
M	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	9	11	6
N	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	9	17	6
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	0	0	0
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	22	33	17
R	PHOTONICS, SCHMITT TRIGGERS, AND CABLE FABRICATION	0	0	0
S	INPUT/OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	14	11	11
T	INFRARED, LASERS, AND DISPLAY TUBES	9	11	6
U	PROGRAMMING, DB AND POWER RATIOS	22	22	22

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30870

0V-TSK

GP SPC SPC
0004 026 027

A 1 A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR
A 2 A1-02 DO YOU USE A PUBLICATION, SUCH AS A TECHNICAL ORDER OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY
A 3 A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.
A 4 A1-04 DO YOU FIND THE SQUARE ROOT OF A QUANTITY.
A 5 A1-05 DO YOU SOLVE FOR AN UNKNOWN QUANTITY.
A 6 A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.
A 7 A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.

MODULE 3 - ELECTRONIC MATHEMATICS

A 8 A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.
A 9 A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS
A 10 A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS.
A 11 A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.

A 12 A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES.
A 13 A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.
A 14 A1-14 DO YOU SOLVE OR USE PROPORTIONS.

A 15 A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT.
A 16 A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).
A 17 A2-03 DO YOU USE THE TERM OHM.

A 18 A2-04 DO YOU USE THE TERM ION.
A 19 A2-05 DO YOU USE THE TERM DYNE.
A 20 A2-06 DO YOU USE THE TERM AMPERE.
A 21 A2-07 DO YOU USE THE TERM NEUTRON.
A 22 A2-08 DO YOU USE THE TERM COULOMB.

MODULE 4 - DIRECT CURRENT AND VOLTAGE

A 23 A2-09 DO YOU USE THE TERM PROTON.
A 24 A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.
A 25 A3-02 DO YOU INSPECT RESISTORS.
A 26 A3-03 DO YOU CLEAN RESISTORS.
A 27 A3-04 DO YOU ADJUST RESISTORS.
A 28 A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.
A 29 A3-06 DO YOU REMOVE OR REPLACE RESISTORS.
A 30 A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB.
A 31 A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS.
A 32 A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT OR

MODULE 5 - RESISTANCE, RESISTORS, AND SCHEMATIC SYMBOLS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30870

GP SPC SPC
0004 026 027

DY-TSK

QUESTION	ANSWER	GP	SPC	SPC
A 33 A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE OHMIC VALUE OF RESISTANCE.	2	6	0	0
A 34 A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE TOLERANCE OF RESISTORS.	2	6	0	0
A 35 A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE FAILURE RATE OF RESISTORS.	2	6	0	0
A 36 A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO REPRESENT ANY OF THE FOLLOWING COMPONENTS: BATTERY.	0	0	0	0
A 37 A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT ANY OF THE FOLLOWING COMPONENTS: BATTERY.	0	0	0	0
A 38 A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	0	0	0	0
A 39 A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	0	0	0	0
A 40 A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	0	0	0	0
A 41 A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	0	0	0	0
A 42 A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 43 A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 44 A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 45 A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 46 A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 47 A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 48 A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 49 A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 50 A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
A 51 A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	0
B 52 01-01 DO YOU MEASURE RESISTANCE.	0	0	0	0
B 53 01-02 DO YOU REPAIR AN OHMMETER.	0	0	0	0
B 54 01-03 DO YOU MEASURE VOLTAGE.	5	6	3	3
B 55 01-04 DO YOU REPAIR A VOLTMETER.	0	0	0	0
B 56 01-05 DO YOU REPAIR AN AMMETER.	0	0	0	0
B 57 01-06 DO YOU MEASURE CURRENT.	0	0	0	0
B 58 01-07 DO YOU USE A MULTIMETER.	0	0	0	0

MODULE 6 - MULTIMETER USES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30670

6P SPC 0004 026 SPC 027

DY-TSK

[illegible]

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30270

QV-TSK

GP SPC SPC
0004 026 027

B 00 03-22 00	YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO	0	0	0	0
B 00 03-23 00	YOU WORK WITH POWER INDUCTORS.	2	0	0	3
B 00 03-24 00	YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	2	0	0	3
B 01 03-25 00	YOU WORK WITH RADIO FREQUENCY INDUCTORS.	0	0	0	0
C 92 01-01 00	YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS ON YOUR PRESENT JOB.	2	0	0	3
C 93 01-02 00	YOU INSPECT CAPACITORS.	0	0	0	0
C 94 01-03 00	YOU CLEAN CAPACITORS.	0	0	0	0
C 95 01-04 00	YOU ADJUST CAPACITORS.	0	0	0	0
C 96 01-05 00	YOU TEST CAPACITORS.	0	0	0	0
C 97 01-06 00	YOU DISCHARGE CAPACITORS.	0	0	0	0
C 98 01-07 00	YOU REMOVE OR REPLACE CAPACITORS.	0	0	0	0
C 99 01-08 00	YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	0	0	0	0
C 100 01-09 00	YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	0	0	0	0
C 101 01-10 00	YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	0	0	0	0
C 102 01-11 00	YOU USE OR REFER TO CAPACITANCE.	0	0	0	0
C 103 01-12 00	YOU USE OR REFER TO DIELECTRIC CONSTANT.	0	0	0	0
C 104 01-13 00	YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.	0	0	0	0
C 105 01-14 00	YOU USE OR REFER TO CAPACITIVE REACTANCE.	0	0	0	0
C 106 01-15 00	YOU USE OR REFER TO CAPACITOR COLOR CODES.	0	0	0	0
C 107 01-16 00	THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.	0	0	0	0
C 108 01-17 00	THE CAPACITORS YOU WORK WITH ARE IN AC CIRCUITS.	0	0	0	0
C 109 01-18 00	THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH BOTH DC AND AC.	0	0	0	0
C 110 01-19 00	THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER WHICH CIRCUITS.	0	0	0	0
C 111 01-20 00	YOU CALCULATE CAPACITANCE FOR A PARTICULAR CAPACITOR USING FORMULAS.	0	0	0	0
C 112 01-21 00	YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL	0	0	0	0
C 113 01-22 00	YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL	0	0	0	0
C 114 01-23 00	YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES.	0	0	0	0
C 115 01-24 00	YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL.	0	0	0	0
C 116 01-25 00	YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS.	0	0	0	0
C 117 01-26 00	YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY	0	0	0	0

MODULE 12 - CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30870

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GP SPC SPC
0004 026 027

C 118 C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.	0	0	0	0
C 119 C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO CAPACITANCE.	0	0	0	0
C 120 C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.	0	0	0	0
C 121 C1-30 DO YOU WORK WITH MOTOR-STATOR CAPACITORS (VARIABLE).	0	0	0	0
C 122 C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS.	0	0	0	0
C 123 C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).	0	0	0	0
C 124 C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).	0	0	0	0
C 125 C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).	0	0	0	0
C 126 C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).	0	0	0	0
C 127 C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS.	0	0	0	0
C 128 C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.	0	0	0	0
C 129 C2-02 DO YOU INSPECT TRANSFORMERS.	0	0	0	0
C 130 C2-03 DO YOU CLEAN TRANSFORMERS.	2	0	0	3
C 131 C2-04 DO YOU ADJUST TRANSFORMERS.	0	0	0	0
C 132 C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.	2	0	0	3
C 133 C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.	0	0	0	0
C 134 C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING.	2	0	0	3
C 135 C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTANCE AND MUTUAL INDUCTANCE (M).	0	0	0	0
C 136 C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.	0	0	0	0
C 137 C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS.	0	0	0	0
C 138 C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS.	0	0	0	0
C 139 C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS.	0	0	0	0
C 140 C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS.	0	0	0	0
C 141 C2-14 DO YOU WORK WITH AUTOTRANSFORMERS.	0	0	0	0
C 142 C2-15 DO YOU WORK WITH POWER TRANSFORMERS.	0	0	0	0
C 143 C2-16 DO YOU WORK WITH AUDIO FREQUENCY TRANSFORMERS.	0	0	0	0
C 144 C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.	0	0	0	0
C 145 C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMER.	0	0	0	0
C 146 C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE.	0	0	0	0
C 147 C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE.	0	0	0	0
C 148 C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES.	0	0	0	0
C 149 C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	0	0	0	0

MODULE 15 - TRANSFORMERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

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C 150 C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN?	0	0	0	0
C 151 C2-24 DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 152 C2-25 DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 153 C2-26 DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 154 C2-27 DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 155 C2-28 DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 156 C2-29 DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 157 C2-30 DO YOU REFER TO THE COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0	0
C 158 C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING TRANSFORMERS YOU WORK WITH.	0	0	0	0
C 159 C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH.	0	0	0	0
C 160 C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO?	0	0	0	0
C 161 C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS.	0	0	0	0
C 162 C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	0	0	0	0
C 163 C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	0	0	0	0
C 164 C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH 3 PHASE TRANSFORMERS.	0	0	0	0
C 165 C2-38 DO YOU INSPECT 3 PHASE TRANSFORMERS.	0	0	0	0
C 166 C2-39 DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.	0	0	0	0
C 167 C2-40 DO YOU ADJUST 3 PHASE TRANSFORMERS.	0	0	0	0
C 168 C2-41 DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.	0	0	0	0
C 169 C2-42 DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE TRANSFORMER.	0	0	0	0
C 170 C2-43 DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER PARTS, SUCH AS A WINDING.	0	0	0	0
C 171 C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS.	2	0	0	3
C 172 C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS.	3	4	3	3
C 173 C3-03 DO YOU USE OR REFER TO REPERITIVITY OF MAGNETIC MATERIALS.	0	0	0	0
C 174 C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS.	0	0	0	0

MODULE 13 - MAGNETISM

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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C 175 C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.
C 176 C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.
C 177 C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.
C 178 C3-08 DO YOU USE OR REFER TO WEGER'S THEORY OF MAGNETISM.
C 179 C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.
C 180 C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION.
C 181 C3-11 DO YOU USE OR REFER TO FLUX DENSITY.
C 182 C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT.
C 183 C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.
C 184 C3-14 DO YOU USE THE LEFT THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.
D 185 D1-01 DO YOU WORK WITH RC, LR, OR RCL CIRCUITS ON YOUR PRESENT JOB.
D 186 D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.
D 187 D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.
D 188 D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.
D 189 D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.
D 190 D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS.
D 191 D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.
D 192 D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.
D 193 D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.
D 194 D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.
D 195 D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS.
D 196 D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.
D 197 D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.
D 198 D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.
D 199 D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.

TASK GROUP SUMMARY
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0 200 01-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS.	0	0	0	0
0 201 01-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS.	0	0	0	0
0 202 01-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS.	0	0	0	0
0 203 01-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS.	0	0	0	0
0 204 01-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	0	0	0	0
0 205 01-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS: SINE OF AN ANGLE = OPPOSITE SIDE / HYPOTENUSE, COSINE OF AN ANGLE = ADJACENT SIDE / HYPOTENUSE, TANGENT OF AN ANGLE = OPPOSITE SIDE / ADJACENT SIDE, SECANT OF AN ANGLE = HYPOTENUSE / ADJACENT SIDE, COSECANT OF AN ANGLE = HYPOTENUSE / OPPOSITE SIDE, COTANGENT OF AN ANGLE = ADJACENT SIDE / OPPOSITE SIDE, AND RESISTANCE IN CAPACITIVE CIRCUITS.	0	0	0	0
0 206 01-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS.	0	0	0	0
0 207 01-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS.	0	0	0	0
0 208 01-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS.	0	0	0	0
0 209 01-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS.	0	0	0	0
0 210 01-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS.	0	0	0	0
0 211 01-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS.	0	0	0	0
0 212 01-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS.	0	0	0	0
0 213 01-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS.	0	0	0	0
0 214 01-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS.	0	0	0	0
0 215 01-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS.	0	0	0	0
0 216 01-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD.	0	0	0	0
0 217 01-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW.	0	0	0	0
0 218 01-34 DO YOU CHECK CAPACITORS USING OHMMETERS.	0	0	0	0
0 219 01-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION.	0	0	0	0
0 220 01-36 DO YOU CHECK INDUCTORS USING OHMMETERS.	0	0	0	0
0 221 01-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION.	0	0	0	0
0 222 01-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE MAXIMUM, PF=1, AND PA=PT FOR RESONANT CIRCUITS.	0	0	0	0
0 223 01-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS.	0	0	0	0
0 224 01-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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D 225 01-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT	0	0	0	
D 226 01-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70-7 PERCENT OF THE PEAK	0	0	0	
D 227 01-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q.	0	0	0	
U 228 01-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT	0	0	0	
D 229 02-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR	0	0	0	
D 230 02-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS.	0	0	0	
U 231 02-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE.	0	0	0	MODULE 24 - SERIES RESONANCE
D 232 02-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS.	0	0	0	MODULE 25 - PARALLEL RESONANCE
D 233 02-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE	0	0	0	MODULE 26 - TIME CONSTANTS
D 234 02-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS.	0	0	0	
D 235 02-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A	0	0	0	
D 236 02-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT	0	0	0	
U 237 02-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	0	0	0	
D 238 02-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR	0	0	0	
D 239 03-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS ON YOUR PRESENT JOB.	0	0	0	
D 240 03-02 DO YOU INSPECT FILTER CIRCUITS.	0	0	0	MODULE 27 - FILTERS
D 241 03-03 DO YOU CLEAN FILTER CIRCUITS.	0	0	0	
D 242 03-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS.	0	0	0	
D 243 03-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.	0	0	0	
D 244 03-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER CIRCUITS.	0	0	0	
D 245 03-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT.	0	0	0	

TASK GROUP SUMMARY
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OPERATIONS

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D 244 03-09 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	9	0	0	0
D 247 03-09 DO YOU WORK ON LOW PASS FILTERS.	0	0	0	0
D 248 03-10 DO YOU WORK ON HIGH PASS FILTERS.	0	0	0	0
D 249 03-11 DO YOU WORK ON BANDPASS FILTERS.	0	0	0	0
D 251 03-12 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	0	0	0	0
D 250 03-12 DO YOU WORK ON BAND-REJECT FILTERS.	0	0	0	0
D 252 03-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATIONS.	0	0	0	0
D 253 03-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATIONS.	0	0	0	0
D 254 03-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATIONS.	0	0	0	0
D 255 03-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	0	0	0	0
D 256 03-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	0	0	0	0
D 257 03-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	0	0	0	0
D 258 03-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	U	0	0	0
D 259 03-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	0	0	0	0
D 260 03-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	0	0	0	0
E 261 01-01 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT JOB.	U	0	0	0
E 262 01-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
E 263 01-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
E 264 01-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
E 265 01-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE RC COUPLING FUNCTIONS.	0	0	0	0
E 266 01-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE IMPEDANCE COUPLING FUNCTIONS.	0	0	0	0
E 267 01-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE TRANSFORMER COUPLING FUNCTIONS.	0	0	0	0
E 268 01-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS.	0	0	0	0
E 269 01-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS.	0	0	0	0
E 270 01-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS.	0	0	0	0
E 271 01-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS.	0	0	0	0
E 272 01-12 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUIT.	0	0	0	0

MODULE 28 - COUPLING

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

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MODULE 76 - SOLDERING TOOLS AND MATERIALS	MODULE 77 - SOLDERING AND DESOLDERING PROCEDURES	MODULE 16 - RELAYS
E 273 E2-01 ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.		
E 274 E2-02 DO YOU SELECT TYPE OF SOLDER TO USE.		
E 275 E2-03 DO YOU ADD FLUX TO CONNECTIONS.		
E 276 E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS.		
E 277 E2-05 DO YOU STRIP INSULATION FROM WIRES.		
E 278 E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS.		
E 279 E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS.		
E 280 E2-08 DO YOU CUT WIRES.		
E 281 E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS.		
E 282 E2-10 DO YOU TIN SOLDERING IRON TIPS.		
E 283 E2-11 DO YOU CLEAN SOLDERING IRON TIPS.		
E 284 E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.		
E 285 E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS.		
E 286 E2-14 DO YOU INSPECT SOLDERED CONNECTIONS.		
E 287 E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING.		
E 288 E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.		
E 289 E2-17 OR YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.		
E 290 E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL.		
E 291 E2-19 DO YOU MAKE HARDWARE TURRET CONNECTIONS.		
E 292 E2-20 DO YOU MAKE HARDWARE DIPURCATED CONNECTIONS.		
E 293 E2-21 DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.		
E 294 E2-22 DO YOU MAKE PRINTED CIRCUIT BOARD DIPURCATED CONNECTIONS.		
E 295 E2-23 DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.		
E 296 E2-24 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.		
E 297 E2-25 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.		
E 298 E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.		
E 299 E3-02 DO YOU ADJUST RELAYS.		
E 300 E3-03 DO YOU CLEAN RELAYS.		
E 301 E3-04 DO YOU INSPECT RELAYS.		
E 302 E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAY.		
E 303 E3-06 DO YOU REMOVE OR REPLACE PARTS OF RELAY.		
E 304 E3-07 DO YOU STRAIGHTEN RELAY CONTACTS.		
E 305 E3-08 DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.		
E 306 E3-09 DO YOU PERFORM ANY TASKS ON RELAY CORE.		
E 307 E3-10 DO YOU PERFORM ANY TASKS ON RELAY COIL.		
E 308 E3-11 DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.		
E 309 E3-12 DO YOU PERFORM ANY TASKS ON RELAY SPRING.		
E 310 E3-13 DO YOU PERFORM ANY TASKS ON RELAY POLE, SINGLE THROW (SPST), NORMALLY OPEN (NO), SCHEMATIC SYMBOLS		
E 311 E3-14 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE		

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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E 312 E2-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS	0	0	0	0
E 313 E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0	0
E 314 E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0	0
E 315 E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0	0
E 316 E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE.	0	0	0	0
F 317 F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH MICROPHONES.	27	28	28	28
F 318 F1-02 DO YOU INSPECT MICROPHONES.	0	0	0	0
F 319 F1-03 DO YOU CLEAN MICROPHONES.	2	0	0	0
F 320 F1-04 DO YOU OPERATE IN HAVE A JOB IN WHICH YOU USE MICROPHONES.	28	22	28	28
F 321 F1-05 DO YOU TROUBLESHOOT MICROPHONES AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENTS.	2	4	0	0
F 322 F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES COMPONENTS.	0	0	0	0
F 323 F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.	0	0	0	0
F 324 F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.	0	0	0	0
F 325 F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.	3	4	3	3
F 326 F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES.	0	0	0	0
F 327 F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.	2	0	0	3
F 328 F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.	0	0	0	0
F 329 F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES.	0	0	0	0
F 330 F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH SPEAKERS, SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.	33	28	33	33
F 331 F2-02 DO YOU INSPECT SPEAKERS.	0	0	0	0
F 332 F2-03 DO YOU CLEAN SPEAKERS.	0	0	0	0
F 333 F2-04 DO YOU OPERATE IN HAVE A JOB IN WHICH SPEAKERS ARE USED.	33	28	33	33
F 334 F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENTS.	0	0	0	0
F 335 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.	0	0	0	0
F 336 F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.	0	0	0	0
F 337 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.	0	0	0	0
F 338 F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER CONES.	0	0	0	0
F 339 F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SPINDERS.	0	0	0	0
F 340 F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER FIELD COILS.	0	0	0	0

MODULE 17 - MICROPHONES AND SPEAKERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
308X0 30830 30870

DY-TSK

UP SPC SPC
0004 026 027

F 341 F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS. 0 0 0

F 342 F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS. 2 6 0

F 343 F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS. 0 0 0

F 344 F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES. 0 0 0

F 345 F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB. 28 38 14

F 346 F3-02 DO YOU USE AN OSCILLOSCOPE TO PERFORM OPERATIONAL CHECKS. 23 39 14

F 347 F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS. 0 0 0

F 348 F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS. 0 0 0

F 349 F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY. 2 6 0

F 350 F3-06 DO YOU USE AN OSCILLOSCOPE TO MEASURE TIME. 0 0 0

F 351 F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE LISSAJOUS PATTERNS. 0 0 0

F 352 F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES. 0 0 0

F 353 F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER. 5 6 6

F 354 F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE. 14 17 14

F 355 F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL

G 356 G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES ON YOUR PRESENT JOB. 0 0 0

G 357 G1-02 DO YOU INSPECT DIODES. 0 0 0

G 358 G1-03 DO YOU REMOVE OR REPLACE DIODES. 0 0 0

G 359 G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT. 0 0 0

G 360 G1-05 DO YOU USE ENERGY LEVEL DIAGRAM IN YOUR WORK WITH DIODES. 0 0 0

G 361 G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE FOR DIODES. 0 0 0

G 362 G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES. 0 0 0

G 363 G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE. 0 0 0

G 364 G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS. 0 0 0

G 365 G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW. 0 0 0

MODULE 20 - OSCILLOSCOPE USES

MODULE 29 - PN JUNCTIONS AND DIO

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

302XG 3083G 3087C

JP SPC SPC
0004 026 027

DY-TSK

6 366 61-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD BIAS RESISTANCE.	0	0	0
6 367 61-12 DO YOU USE OR REFER TO DIODE COLOR CODING.	0	0	0
6 368 61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
6 369 61-14 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
6 370 61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538.	0	0	0
6 371 61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
6 372 61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
6 373 61-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE BIAS RESISTANCE.	0	0	0
6 374 61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT.	0	0	0
6 375 61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
6 376 61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
6 377 61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL).	0	0	0
6 378 61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM).	0	0	0
6 379 61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END.	0	0	0
6 380 61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR SILICON.	0	0	0
6 381 61-26 IS IT IMPORTANT FOR YOU TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT CURVE.	0	0	0
6 382 61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE IS CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT CURVE.	0	0	0
6 383 61-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR REVERSE BIASED.	0	0	0
6 384 61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS.	0	0	0
6 385 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS.	0	0	0
6 386 61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
1000 0000 0000

DY-TSA

GP SPC SPC
00L4 026 027

6 387 61-22 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTION MATERIALS.	U	U	0
6 388 61-23 DO YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS.	U	0	0
6 389 61-24 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS.	U	0	0
6 390 61-25 DO YOU USE OR REFER TO COLOR IMPURITY IN SEMICONDUCTORS.	U	0	0
6 391 61-26 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS.	U	U	U
6 392 61-27 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL.	U	U	U
6 393 61-28 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL.	U	0	0
6 394 61-29 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS.	U	0	U
6 395 61-30 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS.	U	0	U
6 396 61-31 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS.	U	U	U
6 397 61-32 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS.	U	U	U
6 398 61-33 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL.	U	0	0
6 399 61-34 DO YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES.	U	0	0
6 400 61-35 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS.	0	0	0
6 401 61-36 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION.	U	0	0
6 402 61-37 DO YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING.	0	U	0
6 403 61-38 DO YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING.	U	0	0
6 404 61-39 DO YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING.	0	0	0
6 405 61-40 DO YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING.	U	0	0
6 406 62-01 DO YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB.	U	U	0
6 407 62-02 DO YOU INSPECT TRANSISTORS.	0	U	0
6 408 62-03 DO YOU REMOVE OR REPLACE TRANSISTORS.	U	0	0
6 409 62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT.	0	0	0
6 410 62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	U	U	0
6 411 62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	U	0	0
6 412 62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS.	U	0	0

MODULE 30 - TRANSISTORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK

OPERATIONS
302XC 30232 30270
CP SPC SPC
0004 026 027

6 413 62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.	U	0	0	0			
6 414 62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.	0	0	0	0			
6 415 62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).	0	0	0	0			
6 416 62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.	0	0	0	0			
6 417 62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.	U	0	0	0			
6 418 62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS 01, 02, 03, ETC.	0	0	0	0			
6 419 62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.	U	0	0	0			
6 420 62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IS NORMALLY SIGNIFICANTLY	0	0	0	0			
6 421 62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE	0	0	0	0			
6 422 62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE	0	0	0	0			
6 423 62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.	U	0	0	0			
6 424 62-19 DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.	U	0	0	0			
6 425 62-20 DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.	U	0	0	0			
6 426 62-21 DO YOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.	0	0	0	0			
6 427 62-22 DO YOU CALCULATE THE BETA TRANSISTOR GAINS.	0	0	0	0			
6 428 62-23 DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.	0	0	0	0			
6 429 62-24 DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.	0	0	0	0			
6 430 63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.	U	0	0	0			
6 431 63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS.	0	0	0	0			MODULE 31 - AMPLIFIER PRINCIPLES
6 432 63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS.	U	0	0	0			
6 433 63-04 DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.	U	0	0	0			
6 434 63-05 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTOR AMPLIFIERS.	U	0	0	0			MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS
6 435 63-06 DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIERS.	U	0	0	0			
6 436 63-07 DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.	U	0	0	0			
6 437 63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN	U	0	0	0			

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK

OPERATIONS
308XC 3083C 3087DSP SPC SPC
0004 026 027

6 438 63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 439 63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE
IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN
6 440 63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 441 63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE
IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL.
6 442 63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE
CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE
6 443 63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER,
DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS
6 444 63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q
(QUIESCENT POINT) FOR A TRANSISTOR.
6 445 63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A
PARTICULAR TRANSISTOR.
6 446 63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).
6 447 63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).
6 448 63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).
6 449 63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE
6 450 63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE
6 451 63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC
TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY
6 452 63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT
IS GENERATED WITH LESS COLLECTOR VOLTAGE AS
6 453 63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF
A TRANSISTOR AT DIFFERENT TEMPERATURES.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30870

GP SPC SPC
0004 026 029

DY-TSA

6 459 63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	U	0	0	0
6 458 63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
6 456 63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	U	0	0	0
6 457 63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
6 458 63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
6 459 63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0	0
6 460 63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE EMITTER (SWAMPING) RESISTOR	U	0	0	0
6 461 63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS.	0	0	0	0
6 462 63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS.	0	0	0	0
6 463 63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION	0	0	0	0
6 464 63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION	0	0	0	0
6 465 63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS.	0	0	0	0
6 466 63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0	0
6 467 63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	U	0	0	0
6 468 63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	U	0	0	0
6 469 63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	U	0	0	0
6 470 63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	U	0	0	0
6 471 63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	U	0	0	0
6 472 63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	U	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

3022-10MS
3022 30230 30570

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	GP	SPC	SPC	SPC
	0004	026	027	
G 473 63-44 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	0	0	0	
G 474 63-45 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0	
G 475 63-46 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0	
G 476 63-47 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0	
G 477 63-48 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	0	0	0	
G 478 63-49 THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.	0	0	0	
G 480 63-51 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.	0	0	0	
G 481 63-52 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.	0	0	0	
G 482 63-53 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS.	0	0	0	
G 483 63-54 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.	0	0	0	
G 484 63-55 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.	0	0	0	
M 485 M1-01 DO YOU USE OR REFER TO VARACTORS.	3	0	0	
M 486 M1-02 DO YOU USE OR REFER TO TUNNEL DIODES.	0	0	0	
M 487 M1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FETTS).	0	0	0	
M 488 M1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.	0	0	0	
M 489 M1-05 DO YOU USE OR REFER TO ZENER DIODES.	0	0	0	
M 490 M1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS.	6	6	6	
M 491 M2-01 ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.	2	6	0	
M 492 M2-02 DO YOU INSPECT POWER SUPPLIES.	0	0	0	
M 493 M2-03 DO YOU CLEAN POWER SUPPLIES.	0	0	0	
M 494 M2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES.	0	0	0	
M 495 M2-05 DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.	0	0	0	
M 496 M2-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.	0	0	0	
M 497 M2-07 DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.	0	0	0	
M 498 M2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY PANTS.	0	0	0	
M 499 M2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS.	0	0	0	
M 500 M2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.	0	0	0	

MODULE 33 - SELECTED SOLID STATE DEVICES

MODULE 34 - SOLID STATE POWER SUPPLY RECTIFIERS AND FILTERS

MODULE 35 - SOLID STATE POWER SUPPLY REGULATIONS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
30870 30880 30870

OY-TSK

GP SPC SPC
0004 026 027

M 501 M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.
M 502 M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.
M 503 M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.
M 504 M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.
M 505 M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.
M 506 M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.
M 507 M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.
M 508 M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.
M 509 M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.
M 510 M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.
M 511 M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.
M 512 M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.
M 513 M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.
M 514 M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.
M 515 M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.
M 516 M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.
M 517 M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.
M 518 M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DONOT REMEMBER WHICH TYPE OF FILTER.
M 519 M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.
M 520 M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.
M 521 M3-02 DO YOU INSPECT OSCILLATORS.
M 522 M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.
M 523 M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.
M 524 M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.
M 525 M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.
M 526 M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.
M 527 M3-08 DO YOU USE OR REFER TO FEEDBACK.
M 528 M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD).
M 529 M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.
M 530 M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.
M 531 M3-12 DO YOU USE OR REFER TO DAMPING.
M 532 M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.

MODULE 42 - PRINCIPLES OF OSCILLATION

MODULE 43 - SOLID STATE LC OSCILLATOR

MODULE 44 - SOLID STATE PC OSCILLATOR

MODULE 46 - SOLID STATE PULSED AND BLOCKING OSCILLATOR

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
308XC 30830 30370

DY-TSK

SPC SPC
0004 026 027

M 533 M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.
M 534 M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.
M 535 M3-16 DO YOU USE OR REFER TO UNDER DAMPING.
M 536 M3-17 DO YOU USE OR REFER TO OVER DAMPING.
M 537 M3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.
M 538 M3-19 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.
M 539 M3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.
M 540 M3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.
M 541 M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS.
M 542 M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS.
M 543 M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.
M 544 M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.
M 545 M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.
M 546 M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF SINUSOIDAL OSCILLATORS.
I 547 11-01 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT JOB.
I 548 11-02 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.
I 549 11-03 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING CIRCUITS.
I 550 11-04 DO YOU CALIBRATE WAVE SHAPING OR GENERATING CIRCUITS.
I 551 11-05 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR GENERATING CIRCUITS.
I 552 11-06 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE WAVE SHAPING OR GENERATING CIRCUITS.
I 553 11-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR GENERATING CIRCUITS.
I 554 11-08 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE SHAPING OR GENERATING CIRCUITS.
I 555 11-09 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.
I 556 11-10 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.
I 557 11-11 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.
I 558 11-12 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.
I 559 11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.
I 560 11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.
I 561 11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.
I 562 11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF MULTIVIBRATORS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

22-2A-1015
202YC 20230 30870

6P SPC SPC
6004 026 027

DY-YSK

TEST NO.	TEST DESCRIPTION	TEST RESULT	TEST DATE	TESTER	REMARKS
1	543 12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS ON YOUR PRESENT JOB.	U	0	0	
1	544 12-02 DO YOU WORK WITH SERIES DIODE LIMITERS.	U	0	0	
1	545 12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS.	U	0	0	
1	546 12-04 DO YOU WORK WITH LIMITERS WITH BIAS.	U	0	0	
1	547 12-05 DO YOU WORK WITH ZENER DIODE LIMITERS.	U	0	0	
1	548 12-06 DO YOU WORK WITH TRANSISTOR LIMITERS.	U	0	0	
1	549 12-07 DO YOU WORK WITH DIODE CLAMPERS.	U	0	0	
1	550 12-08 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	551 12-09 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	552 12-10 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	553 12-11 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	554 12-12 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	555 12-13 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	556 12-14 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	557 12-15 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	558 12-16 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	559 12-17 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	560 12-18 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	561 12-19 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	562 12-20 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	563 12-21 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	564 12-22 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	565 12-23 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	566 12-24 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	567 12-25 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	568 12-26 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	569 12-27 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	570 12-28 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	571 12-29 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	572 12-30 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	573 12-31 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	574 12-32 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	575 12-33 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	576 12-34 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	577 12-35 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	578 12-36 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	579 12-37 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	580 12-38 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	581 12-39 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	582 12-40 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	583 12-41 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	584 12-42 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	585 12-43 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	586 12-44 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	587 12-45 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	588 12-46 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	589 12-47 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	590 12-48 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	591 12-49 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	592 12-50 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	593 12-51 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	594 12-52 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	595 12-53 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	596 12-54 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	597 12-55 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	598 12-56 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	599 12-57 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	600 12-58 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	601 12-59 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	602 12-60 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	U	0	0	
1	603 1				

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

30240 00000 00870

00-TSK

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0004 026 027

1 595	13-23	DO YOU USE OR REFER TO MULTIMETER (VETROOD, PENTODE, ETC.) AMPLIFICATION FACTORS.	U	U	0
1 596	13-24	DO YOU USE OR REFER TO ELECTRON TUBE TRANSMITTANCE (G, WHICH IS MEASURED IN MHOS).	U	0	0
1 597	13-25	DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON TUBE TRANSMITTANCE.	U	0	0
1 598	13-26	DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE.	0	0	0
1 599	13-27	DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE RESISTANCE.	U	U	0
1 600	13-28	DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE.	0	0	0
1 601	13-29	IN YOUR WORK WITH ELECTRON TUBES, DO YOU USE OR REFER TO CHARACTERISTIC CURVES.	U	U	0
1 602	13-30	DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS.	U	U	0
1 603	13-31	DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS.	U	U	0
1 604	13-32	DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF.	0	0	0
1 605	13-33	DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION.	U	U	0
1 606	13-34	DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN.	2	U	3
1 607	13-35	DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY.	U	0	0
1 608	13-36	DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	U	0	0
1 609	13-37	DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
1 610	13-38	DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
1 611	13-39	DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
1 612	13-40	DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES, SUCH AS INPUT CAPACITANCE, ETC.	0	0	0
1 613	13-41	DO YOU USE OR REFER TO TUBE SOCKET NOTATION.	0	0	0
1 614	13-42	DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.	0	0	0
1 615	13-43	DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN	0	0	0
1 616	13-44	DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL, SUCH AS MANUALS, ETC.	U	0	0
1 617	13-45	DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS ON CIRCUITS ON YOUR PRESENT JOB.	0	0	0
1 618	13-46	DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT	U	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30370 30380 30370

01-7SK

GP SPC SPC
0004 026 027

		MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS		MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLIFIERS AND TRIODE LIMITERS		MODULE 59 - SPECIAL PURPOSE ELECTRON TUBES		MODULE 63 - HETERODYNING		MODULE 64 - MODULATION		MODULE 65 - DEMODULATION	
J 619	J1-Q3 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS.	U	U	0	0								
J 620	J1-Q4 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	0	0	0	0								
J 621	J1-Q5 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	U	0	0	0								
J 622	J1-Q6 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	0	0	0	0								
J 623	J1-Q7 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	0	0	0	0								
J 624	J2-Q1 DO YOU WORK WITH GAS TUBES THAT CATHODE OR COLD CATHODE.	0	0	0	0								
J 625	J2-Q2 DO YOU WORK WITH CATHODE RAY TUBES.	2	0	0	0								
J 626	J2-Q3 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	0	0	0	0								
J 627	J2-Q4 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	0	0	0	0								
J 628	J2-Q5 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATONS.	0	0	0	0								
J 629	J2-Q6 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATONS ARE USED.	U	U	0	0								
J 630	J2-Q7 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE.	0	0	0	0								
J 631	J2-Q8 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	0	0	0	0								
J 632	J2-Q9 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	0	0	0	0								
J 633	J2-Q10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	2	0	0	0								
J 634	J2-Q11 DO YOU USE OR REFER TO AQUADAG COATINGS.	0	0	0	0								
J 635	J2-Q12 DO YOU USE OR REFER TO ELECTRON OPTICS.	0	0	0	0								
J 636	J2-Q13 DO YOU USE OR REFER TO PERSISTENCE.	2	0	0	0								
J 637	J2-Q14 DO YOU USE OR REFER TO DECAY TIMES.	0	0	0	0								
J 638	J2-Q15 DO YOU USE OR REFER TO FLUORESCENCES.	U	U	0	0								
J 639	J2-Q16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	0	0	0	0								
J 640	J3-Q1 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	3	0	0	0								
J 641	J3-Q2 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	2	0	0	0								
J 642	J3-Q3 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	0	0	0	0								
J 643	J3-Q4 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	U	U	0	0								
J 644	J3-Q5 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	0	0	0	0								
J 645	J3-Q6 DO YOU PERFORM ANY TASKS ON MODULATED OSCILLATORS.	0	0	0	0								
J 646	J3-Q7 DO YOU WORK ON AN TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	0	0	0	0								

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30SYC 30230 30310

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K 647 KI-02 DO YOU INSPECT AM SYSTEMS.
K 648 KI-03 DO YOU CLEAN AM SYSTEMS.
K 649 KI-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.
K 650 KI-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.
K 651 KI-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.
K 652 KI-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.
K 653 KI-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.
K 654 KI-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.
K 655 KI-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.
K 656 KI-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 657 KI-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.
K 658 KI-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.
K 659 KI-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.
K 660 KI-15 DO YOU PERFORM ANY TASKS ON DETECTORS.
K 661 KI-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.
K 662 KI-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.
K 663 KI-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.
K 664 KI-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.
K 665 KI-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.
K 666 KI-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.
K 667 KI-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.
K 668 KI-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.
K 669 KI-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.
K 670 KI-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.
K 671 KI-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.
K 672 KI-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS.
K 673 KI-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.
K 674 KI-29 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.
K 675 KI-02 DO YOU INSPECT FM SYSTEMS.
K 676 KI-03 DO YOU CLEAN FM SYSTEMS.
K 677 KI-04 DO YOU ALIGN FM SYSTEMS.
K 678 KI-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.
K 679 KI-06 DO YOU TROUBLESHOOT TO FM COMPONENTS.
K 680 KI-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.
K 681 KI-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.
K 682 KI-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.
K 683 KI-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.
K 684 KI-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).

MODULE 68 - AM SYSTEMS

MODULE 69 - FM SYSTEMS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
308VC 30230 30870

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K 685 K2-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	0	0	0	0
K 686 K2-13 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	0	0	0	0
K 687 K2-14 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	0	0	0	0
K 688 K2-15 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	0	0	0	0
K 689 K2-16 DO YOU PERFORM ANY TASKS ON LIMITERS.	0	0	0	0
K 690 K2-17 DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.	0	0	0	0
K 691 K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.	0	0	0	0
K 692 K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.	0	0	0	0
K 693 K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS.	50	22	64	
K 694 K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.	55	33	67	
K 695 K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.	47	17	64	
K 696 K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.	50	17	69	
K 697 K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.	50	26	64	
K 698 K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.	55	24	72	
K 699 K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM.	20	4	28	
K 700 K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.	17	11	22	
K 701 K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.	19	11	22	
K 702 K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM.	26	6	39	
L 703 L1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.	0	0	0	
L 704 L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	0	0	0	
L 705 L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	0	0	0	
L 706 L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR LOGIC SYMBOLS WITH STATE INDICATORS.	0	0	0	
L 707 L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.	0	0	0	
L 708 L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	0	0	0	
L 709 L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	0	0	0	
L 710 L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR LOGIC SYMBOLS WITH STATE INDICATORS.	0	0	0	
L 711 L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.	0	0	0	
L 712 L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES.	0	0	0	
L 713 L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.	0	0	0	
L 714 L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.	0	0	0	

MODULE 51 - NUMBERING SYSTEM AND
MATHEMATICAL COMPUTATIONSMODULE 52 - LOGIC FUNCTIONS AND
BOOLEAN EQUATIONS

PCT HORS ANSWER YES FOR OPER DAFSC GPS

GROUP PAGE 120

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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0004 026 027

L 715	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.	U	0	0	0
L 716	L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC TRANSISTOR LOGIC (DCTL) CIRCUITS.	U	0	0	0
L 717	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.	U	0	0	0
L 718	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	U	0	0	0
L 719	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.	U	0	0	0
L 720	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.	U	0	0	0
L 721	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.	U	0	0	0
L 722	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.	U	0	0	0
L 723	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.	U	0	0	0
L 724	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	U	0	0	0
L 725	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.	U	0	0	0
L 726	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.	U	0	0	0
L 727	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.	U	0	0	0
L 728	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.	U	0	0	0
L 729	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS.	U	0	0	0
L 730	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.	U	0	0	0
L 731	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.	U	0	0	0
L 732	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS.	U	0	0	0
L 733	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.	U	0	0	0
L 734	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.	U	0	0	0
L 735	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.	U	0	0	0
L 736	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.	U	0	0	0
L 737	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.	U	0	0	0
L 738	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.	U	0	0	0
L 739	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.	U	0	0	0

MODULE 53 - LOGIC CIRCUITS AND DIAGRAMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
302XC 30230 30870

DI-73K

SPC SPC
000 026 027

L 740 L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS.		U	0	0	0
L 741 L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.		2	0	0	0
L 742 L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.		U	0	0	0
L 743 L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.		U	0	0	0
L 744 L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.		U	0	0	0
L 745 L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.		U	0	0	0
L 746 L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.		U	0	0	0
L 747 L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.		2	0	0	0
L 748 L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.		U	0	0	0
L 749 L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.		U	0	0	U
L 750 L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.		U	0	0	U
L 751 L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.		U	0	U	U
L 752 L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTING		0	0	0	0
L 753 L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTER.		0	0	0	0
L 754 L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.		U	0	0	0
L 755 L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE		U	0	0	0
L 756 L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTER.		0	0	0	0
L 757 L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.		0	0	0	U
L 758 L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.		U	0	0	0
L 759 L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING		U	0	0	0
L 760 L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL		U	0	0	0
L 761 L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.		U	0	0	0
L 762 L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.		U	0	0	0
L 763 L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.		U	0	0	0
L 764 L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A		U	0	0	U

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
30210 30210 30210

0Y-TSK

GP SPC SPC
U004 026 U27

M 765 M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS.
M 766 M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.
M 767 M1-03 DO YOU WORK WITH PULSED OSCILLATIONS WITH
REGENERATIVE FEEDBACK.
M 768 M1-04 DO YOU WORK WITH PULSED OSCILLATIONS WITHOUT
REGENERATIVE FEEDBACK.
M 769 M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS.
M 770 M1-06 DO YOU USE OR REFER TO RISE TIME.
M 771 M1-07 DO YOU USE OR REFER TO FALL OR FLATBACK TIME.
M 772 M1-08 DO YOU USE OR REFER TO SLEEP TIME.
M 773 M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF
SAWTOOTH WAVEFORMS.
M 774 M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH
WAVEFORMS.
M 775 M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH
WAVEFORMS.
M 776 M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH
WAVEFORMS.
M 777 M2-01 DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.
M 778 M2-02 DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS
WHILE USING SIGNAL GENERATORS.
M 779 M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS
ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL
GENERATORS.
M 780 M2-04 DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR
SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.
M 781 M2-05 DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST
REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.
M 782 M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS.
M 783 M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS
SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.
M 784 M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.
M 785 M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.
M 786 M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION
GENERATORS.
M 787 M3-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH
ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR
M 788 M3-02 DO YOU INSPECT MOTORS.
M 789 M3-03 DO YOU CLEAN OR LUBRICATE MOTORS.
M 790 M3-04 DO YOU OPERATE MOTORS.
M 791 M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS.
M 792 M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS.
M 793 M3-07 DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE
CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT
M 794 M3-08 DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.

MODULE 19 - MOTORS AND GENERATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

QUESTIONS
00000 00000 00000

QY-TSK

UP SPC SPC
0000 026 027

M 795 M3-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	U	0	0	0
M 796 M3-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	U	0	0	0
M 797 M3-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ROTORS.	U	0	0	0
M 798 M3-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	U	0	0	0
M 799 M3-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	U	0	0	0
M 800 M3-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	U	0	0	0
M 801 M3-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	U	0	0	0
M 802 M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	U	0	0	0
M 803 M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	U	0	0	0
M 804 M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	U	0	0	0
M 805 M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS.	U	0	0	0
M 806 M3-20 DO YOU WORK WITH INDUCTION MOTORS.	U	0	0	0
M 807 M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS.	U	0	0	0
M 808 M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS.	U	0	0	0
M 809 M3-23 DO YOU INSPECT GENERATORS.	U	0	0	0
M 810 M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS.	U	0	0	0
M 811 M3-25 DO YOU OPERATE GENERATORS.	U	0	0	0
M 812 M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	U	0	0	0
M 813 M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS.	U	0	0	0
M 814 M3-28 DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO PARTS.	U	0	0	0
M 815 M3-29 DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	U	0	0	0
M 816 M1-01 DO YOU WORK WITH METERS ON YOUR PRESENT JOB.	U	0	0	0
M 817 M1-02 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER PERMANENT MAGNETS.	U	0	0	0
M 818 M1-03 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER MOVING COILS.	U	0	0	0
M 819 M1-04 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER SPIRAL SPRINGS.	U	0	0	0
M 820 M1-05 DO YOU READ METER SCALES.	U	0	0	0
M 821 M1-06 DO YOU EXTEND THE RANGE OF AMMETERS.	U	0	0	0
M 822 M1-07 DO YOU ZERO OHMMETERS.	U	0	0	0
M 823 M1-08 DO YOU ZERO AMMETERS.	U	0	0	0
M 824 M1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS.	U	0	0	0

MODULE 18 - METER MOVEMENTS AND CIRCUITS

PCT MBRB ANSWRG YES FOR OPER DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPSUMS PAGE 130

OPERATION'S
306X0 39530 333-1

0Y-TSK

WP SPC SPC
0004 026 027

Task ID	Description	WP	SPC	SPC	Module
N 425	M1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	U	0	0	
N 426	M2-01 DO YOU WORK WITH SATURABLE REACTORS ON MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	U	0	0	
N 427	M2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	U	0	0	
N 428	M2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	U	0	0	
N 429	M2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	U	0	0	
N 430	M2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	U	0	0	
N 431	M2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS ON SATURABLE REACTORS.	U	0	0	
N 432	M2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS ON SATURABLE REACTORS COMPONENTS.	2	4	0	MODULE 40 - SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 433	M2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS.	U	0	0	
N 434	M2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD.	U	0	0	
N 435	M2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	2	4	0	
N 436	M2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	U	0	0	
N 437	M2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	U	0	0	
N 438	M2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	U	0	0	
N 439	M2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	U	0	0	
N 440	M2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	U	0	0	
N 441	M2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	U	0	0	
N 442	M3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	U	0	0	
N 443	M3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	U	0	0	MODULE 48 - SOLID STATE SAWTOOTH GENERATORS
N 444	M3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	U	0	0	
N 445	M3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PAT).	U	0	0	
N 446	M3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	U	0	0	MODULE 49 - SOLID STATE TRAPEZOIDAL GENERATORS
N 447	M3-06 DO YOU USE OR REFER TO DIFFERENTIATION CIRCUITS.	U	0	0	
N 448	M3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	U	0	0	
N 449	M3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.	U	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
302XC 30830 503

01-TSK

GP SPC SPC
U004 026 027

M 650 M3-09	DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME	0	0	0	0
M 651 M3-10	DO YOU WORK WITH SQUARE WAVE GENERATORS.	0	0	0	0
M 652 M3-11	DO YOU WORK WITH RECTANGULAR WAVE GENERATORS.	0	0	0	0
M 653 M3-01	DO YOU WORK ON SINGLE SIDEBAND SYSTEMS ON YOUR PRESENT JOB.	0	0	0	0
O 654 01-02	DO YOU INSPECT SSB SYSTEMS.	0	0	0	0
O 655 01-03	DO YOU CLEAN SSB SYSTEMS.	0	0	0	0
O 656 01-04	DO YOU ALIGN SSB SYSTEMS.	0	0	0	0
O 657 01-05	DO YOU TROUBLESHOOT TO SSB SYSTEMS.	0	0	0	0
O 658 01-06	DO YOU TROUBLESHOOT TO SSB COMPONENTS.	0	0	0	0
O 659 01-07	DO YOU REMOVE OR REPLACE SSB SYSTEMS.	0	0	0	0
O 660 01-08	DO YOU REMOVE OR REPLACE SSB COMPONENTS.	0	0	0	0
O 661 01-09	DO YOU PERFORM ANY TASKS ON SSB AUDIO AMPLIFIER.	0	0	0	0
O 662 01-10	DO YOU PERFORM ANY TASKS ON SSB BALANCED MODULATORS.	0	0	0	0
O 663 01-11	DO YOU PERFORM ANY TASKS ON SSB CARRIER OSCILLATORS.	0	0	0	0
O 664 01-12	DO YOU PERFORM ANY TASKS ON SSB LC FILTERS.	0	0	0	0
O 665 01-13	DO YOU PERFORM ANY TASKS ON SSB CRYSTAL FILTERS.	0	0	0	0
O 666 01-14	DO YOU PERFORM ANY TASKS ON SSB MECHANICAL FILTERS.	0	0	0	0
O 667 01-15	DO YOU PERFORM ANY TASKS ON SSB OSCILLATORS.	0	0	0	0
O 668 01-16	DO YOU PERFORM ANY TASKS ON SSB MIXERS.	0	0	0	0
O 669 01-17	DO YOU PERFORM ANY TASKS ON SSB DRIVERS.	0	0	0	0
O 670 01-18	DO YOU PERFORM ANY TASKS ON SSB POWER AMPLIFIERS.	0	0	0	0
O 671 01-19	DO YOU PERFORM ANY TASKS ON SSB RF AMPLIFIERS.	0	0	0	0
O 672 01-20	DO YOU PERFORM ANY TASKS ON SSB FREQUENCY CONVERTERS.	0	0	0	0
O 673 01-21	DO YOU PERFORM ANY TASKS ON SSB IF AMPLIFIERS.	0	0	0	0
O 674 01-22	DO YOU PERFORM ANY TASKS ON SSB DEMODULATORS.	0	0	0	0
O 675 01-23	DO YOU PERFORM ANY TASKS ON SSB DON'T REMEMBER WHICH SYSTEM STAGES.	0	0	0	0
O 676 01-24	DO YOU USE OR REFER TO SELECTIVE FADING.	0	0	0	0
O 677 01-25	DO YOU USE OR REFER TO PEAK POWER.	0	0	0	0
O 678 01-26	DO YOU USE OR REFER TO FREQUENCY STABILITY.	0	0	0	0
O 679 01-27	DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS.	0	0	0	0
O 680 01-28	DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS.	0	0	0	0
O 681 01-29	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS.	0	0	0	0
O 682 01-30	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS.	0	0	0	0
O 683 02-01	DO YOU WORK ON PULSE MODULATION SYSTEMS ON YOUR PRESENT JOB.	2	5	0	0

MODULE 70 - SINGLE SIDEBAND SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK

0 884 02-02 00 YOU INSPECT PULSE MODULATION SYSTEMS.
 0 885 02-03 00 YOU CLEAN PULSE MODULATION SYSTEMS.
 0 886 02-04 00 YOU ALIGN PULSE MODULATION SYSTEMS.
 0 887 02-05 00 YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.
 0 888 02-06 00 YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.
 0 889 02-07 00 YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.
 0 890 02-08 00 YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.
 0 891 02-09 00 YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.
 0 892 02-10 00 YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.
 0 893 02-11 00 YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.
 0 894 02-12 00 YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.
 0 895 02-13 00 YOU WORK ON LINE PULSING MODULATION SYSTEMS.
 0 896 02-14 00 YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.
 0 897 02-15 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.
 0 898 02-16 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHANGING DIODES.
 0 899 02-17 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS.
 0 900 02-18 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.
 0 901 02-19 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS.
 0 902 02-20 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.
 0 903 02-21 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.
 0 904 02-22 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.
 0 905 02-23 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.
 0 906 02-24 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.
 0 907 02-25 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.
 0 908 02-26 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.
 0 909 02-27 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.
 0 910 02-28 00 YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH STAGE.

MODULE 71 - PULSE MODULATION SYSTEMS

GP SPC SPC
0004 026 027

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 00000 00270

DY-TSK

GP SPC SPC
0004 026 027

0 911 02-29 00 YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRT).
0 912 02-30 00 YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).
0 913 02-31 00 YOU USE OR REFER TO PULSE WIDTH (PW).
0 914 02-32 00 YOU USE OR REFER TO PULSE SHAPE.
0 915 02-33 00 YOU USE OR REFER TO PEAK POWER.
0 916 02-34 00 YOU USE OR REFER TO AVERAGE POWER.
0 917 02-35 00 YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PWF).
0 918 02-36 00 YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PWF).
0 919 02-37 00 YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.
0 920 02-38 00 YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.
0 921 02-39 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.
0 922 02-40 00 YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.
0 923 03-01 00 YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.
0 924 03-02 00 YOU INSPECT ANTENNAS.
0 925 03-03 00 YOU CLEAN ANTENNAS.
0 926 03-04 00 YOU PHYSICALLY ALIGN ANTENNAS.
0 927 03-05 00 YOU ELECTRICALLY ALIGN ANTENNAS.
0 928 03-06 00 YOU TROUBLESHOOT TO ANTENNA.
0 929 03-07 00 YOU TROUBLESHOOT TO ANTENNA COMPONENTS.
0 930 03-08 00 YOU REMOVE OR INSTALL ANTENNAS.
0 931 03-09 00 YOU REMOVE OR REPLACE COMPONENTS OR ANTENNAS.
0 932 03-10 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E (ELECTRIC FIELD) LINES.
0 933 03-11 00 YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H (MAGNETIC FIELD) LINES.
0 934 03-12 00 YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS WHICH ARE REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS ANTENNAS.
0 935 03-13 00 YOU WORK WITH MARCONI ANTENNAS.
0 936 03-14 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS ANTENNAS.
0 937 03-15 00 YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS ANTENNAS.
0 938 03-16 00 YOU WORK WITH MARCONI ANTENNAS.
0 939 03-17 00 YOU WORK WITH MARCONI ANTENNAS.

MODULE 67 - ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
30300 0000 0000

OY-TSK

WP SPC SPC
00004 026 027

0 940 03-18 DO YOU WORK WITH BROADCAST ARRAYS.
 0 941 03-19 DO YOU WORK WITH END-FIRE ARRAYS.
 0 942 03-20 DO YOU WORK WITH CARDIOID ARRAYS.
 0 943 03-21 DO YOU WORK WITH COLLINER ARRAYS.
 0 944 03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS.
 0 945 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS.
 0 946 03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS.
 0 947 03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS.
 0 948 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (M) COMPONENTS IN THE ANTENNA
 0 949 03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (M) COMPONENTS IN THE ANTENNA
 0 950 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED.
 0 951 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED.
 0 952 03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON.
 0 953 03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR PARASITIC ELEMENTS.
 0 954 03-32 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS.
 0 955 03-33 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS.
 0 956 03-34 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS.
 0 957 03-35 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN DON'T REMEMBER.
 0 958 03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS.
 0 959 03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS.
 0 960 03-38 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF ANTENNAS.
 0 961 03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS.
 P 962 PI-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS
 P 963 PI-02 DO YOU REFER TO OR USE COPPER LOSS OR I R LOSS IN TRANSMISSION LINES.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308YC 30830 30870

DT-TSK	GP	SPC	SPC	U00M	026	027
P 964 P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES.	0	0	0	0	0	0
P 965 P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES.	0	0	0	0	0	0
P 966 P1-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN TRANSMISSION LINES.	0	0	0	0	0	0
P 967 P1-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN TRANSMISSION LINES.	0	0	0	0	0	0
P 968 P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.	0	0	0	0	0	0
P 969 P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.	0	0	0	0	0	0
P 970 P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.	0	0	0	0	0	0
P 971 P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.	0	0	0	0	0	0
P 972 P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE.	0	0	0	0	0	0
P 973 P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.	0	0	0	0	0	0
P 974 P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	0	0	0	0	0	0
P 975 P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	0	0	0	0	0	0
P 976 P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.	0	0	0	0	0	0
P 977 P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	0	0	0	0	0	0
P 978 P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	0	0	0	0	0	0
P 979 P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-	0	0	0	0	0	0
P 980 P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOAD USING MATCHING TRANSFORMERS.	0	0	0	0	0	0
P 981 P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING DELTA MATCHING.	0	0	0	0	0	0
P 982 P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL	0	0	0	0	0	0
P 983 P1-22 DO YOU REFER TO OR USE THE TERM CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES.	0	0	0	0	0	0
P 984 P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES.	0	0	0	0	0	0
P 985 P1-24 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES.	0	0	0	0	0	0
P 986 P1-25 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES.	0	0	0	0	0	0
P 987 P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.	0	0	0	0	0	0
P 988 P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF A PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.	0	0	0	0	0	0

MODULE 66 - TRANSMISSION LINES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X 30850 30870

GP SPC SPC
0004 026 027

0Y-T5K

P 989 P1-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS
THE PHYSICAL LENGTH OF A TRANSMISSION LINE REMAINS
P 990 P1-20 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION
LINES.
P 991 P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES.
P 992 P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE
MATCHED TO A LOAD USING STUB MATCHING.
P 993 P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS
ON YOUR PRESENT JOB.
P 994 P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS.
P 995 P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS.
P 996 P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS.
P 997 P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS.
P 998 P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS.
P 999 P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS.
P1000 P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY
RESONATORS.
P1001 P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDE.
P1002 P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS.
P1003 P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS.
P1004 P2-12 DO YOU REMOVE OR INSTALL E BENDS.
P1005 P2-13 DO YOU REMOVE OR INSTALL H BENDS.
P1006 P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS.
P1007 P2-15 DO YOU REMOVE OR INSTALL CHORE JOINTS.
P1008 P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS.
P1009 P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS.
P1010 P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS.
P1011 P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES.
P1012 P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES.
P1013 P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF
WAVEGUIDES.
P1014 P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL
OF WAVEGUIDES.
P1015 P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF
WAVEGUIDES.
P1016 P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY
CONDITIONS.
P1017 P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY
CONDITIONS.
P1018 P2-26 DO YOU USE OR REFER TO DUPLAXER FIELD BOUNDARY
CONDITIONS.
P1019 P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST
WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7
P1020 P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST
"A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH

MODULE 74 - WAVEGUIDES AND CAVITY
RESONATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
CENT 30350 30870

DY-TSK

GP SPC SPC
0004 026 027

P1021 P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OFF.

P1022 P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION.

P1023 P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR AND "H" LINES IN WAVEGUIDES.

P1024 P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" AND "H" LINES IN WAVEGUIDES.

P1025 P2-33 DO YOU MEASURE THE TIME PHASE OF "E" AND "H" LINES IN WAVEGUIDES.

P1026 P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" AND "H" LINES IN WAVEGUIDES.

P1027 P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1028 P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1029 P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1030 P2-38 ARE APERTURES (WINDOWS OR RISERS) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1031 P1-39 ARE DON'T REMEMBER WHICH ENERGY COUPLING DEVICE USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1032 P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.

P1033 P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.

P1034 P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT RESONATORS YOU WORK WITH.

P1035 P2-43 ARE CHOKE JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1036 P2-44 ARE ROTATING JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1037 P2-45 ARE DON'T REMEMBER WHICH KIND OF JOINT USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.

P1038 P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING.

P1039 P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING.

P1040 P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING.

P1041 P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER HOW.

P1042 P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308XC 10000 10000

0Y-TSK

P1043 P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS,
TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR
P1049 P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE.
P1045 P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME.
P1046 P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE.
P1047 P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL
CIRCUITRY.
P1048 P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON
VELOCITY MODULATION.
P1049 P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING.
P1050 P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS.
P1051 P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS.
P1052 P3-10 DO YOU WORK WITH REFLEX KLYSTRONS.
P1053 P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT).
P1054 P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC
AMPLIFIERS.
P1055 P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC
AMPLIFIERS.
P1056 P3-14 DO YOU WORK WITH MAGNETRONS.
P1057 P3-15 DO YOU INSPECT TWT OR KLYSTRONS.
P1058 P3-16 DO YOU CLEAN TWT OR KLYSTRONS.
P1059 P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY.
P1060 P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY.
P1061 P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR
KLYSTRONS.
P1062 P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS.
P1063 P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON
ASSEMBLY.
P1064 P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON
COMPONENTS.
P1065 P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS.
P1066 P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS.
P1067 P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS.
P1068 P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS.
P1069 P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC
AMPLIFIERS.
P1070 P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS.
P1071 P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC
AMPLIFIERS.
P1072 P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC
AMPLIFIERS.
P1073 P3-31 DO YOU INSPECT MAGNETRONS.
P1074 P3-32 DO YOU CLEAN MAGNETRONS.
P1075 P3-33 DO YOU ADJUST MAGNETRONS.
P1076 P3-34 DO YOU TUNE MAGNETRONS.
P1077 P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS.

MODULE 75 - MICROWAVE AMPLIFIERS AND
OSCILLATORS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
SUBC 00000 00000

DY-TSK

GP SPC SPC
G00M 026 027

P1078 P3-36 DO YOU TROUBLESHOOT MAGNETRONS.	0	0	0
P1079 P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	0	0	0
P1080 P3-38 DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETRONS.	0	0	0
P1081 P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	0	0	0
P1082 P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	0	0	0
P1083 P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GRIDS.	0	0	0
P1084 P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	0	0	0
P1085 P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	0	0	0
P1086 P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GRIDS.	0	0	0
P1087 P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	0	0	0
P1088 P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS.	0	0	0
P1089 P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	0	0	0
P1090 P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER INJECTOR PLATES.	0	0	0
P1091 P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS.	0	0	0
P1092 P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS.	0	0	0
P1093 P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	0	0	0
P1094 P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	0	0	0
P1095 P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	0	0	0
P1096 P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	0	0	0
P1097 P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	0	0	0
P1098 P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	0	0	0
P1099 P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	0	0	0
P1100 P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GRIDS.	0	0	0
P1101 P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	0	0	0
P1102 P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELICES.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

0Y-TSK

GP SPC SPC
0004 026 027

P1103 P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF
 TWT COLLECTORS. U U 0
 P1104 P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF
 TWT MAGNETS. 0 0 0
 P1105 P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF
 TWT ATTENUATORS. 0 0 0
 P1106 P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 FERRITE CIRCULATORS. U U 0
 P1107 P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 SIGNAL CAVITIES. U 0 0
 P1108 P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 ISOLER CAVITIES. U 0 0
 P1109 P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 VARACTOR DIODES. U 0 0
 P1110 P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 FERRITE ISOLATORS. U 0 0
 P1111 P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER
 REVERSE-BIAS BATTERIES. U 0 0
 P1112 P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.
 PINS. U 0 0
 P1113 P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING
 PINS. U 0 0
 P1114 P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.
 P1115 P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS. U 0 0
 P1116 P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT
 CAVITIES. U 0 0
 P1117 P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.
 P1118 P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS. U 0 0
 Q1119 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS. 3 0 0
 Q1120 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS. 2 0 0
 Q1121 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT
 REGISTERS. U 0 0
 Q1122 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL OF STORAGE
 REGISTERS. U 0 0
 Q1123 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS
 OF SHIFT REGISTERS. 0 0 0
 Q1124 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS
 OF OTHER TYPE REGISTER. U 0 0
 Q1125 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A
 SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES.
 Q1126 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR
 STORAGE DEVICES IN YOUR PRESENT JOB. 11 17 6
 Q1127 Q2-02 DO YOU USE OR REFER TO DELAY LINES. 5 4 3
 Q1128 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES. 3 0 3
 Q1129 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS. 3 0 3
 Q1130 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES. 4 11 3
 Q1131 Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF
 MEMORY SYSTEMS. 3 0 3

PCT MBRS ANSRG YES FOR OPER DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

GPSUMR PAGE 192

OPERATIONS
0000 0000 0000

DY-TSK

GP SPC SPS
0000 026 027

TASK	DESCRIPTION	GP	SPC	SPS
RI151 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.		0	0	0
RI152 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.		0	0	0
RI153 R2-04 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.		0	0	0
RI154 R3-02 DO YOU FABRICATE COAXIAL CABLES.		0	0	0
ST155 ST-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.		0	0	0
SI156 SI-02 DO YOU PERFORM ANY TASKS ON MIXIE LIGHTS OF MIXIE LIGHT DECODER SYSTEMS.		2	4	0
SI157 SI-03 DO YOU ANALYZE MIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.		0	0	0
ST158 ST-02 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.		0	0	0
ST159 ST-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.		0	0	0
SI160 SI-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.		0	0	0
SI161 SI-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.		0	0	0
SI162 SI-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.		0	0	0
SI163 SI-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.		0	0	0
SI164 SI-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.		0	0	0
SI165 SI-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.		0	0	0
SI166 SI-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.		0	0	0
SI167 SI-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.		0	0	0
TI168 TI-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.		3	6	3
TI169 TI-02 DO YOU INSPECT INFRARED SYSTEMS.		0	0	0
TI170 TI-03 DO YOU CLEAN INFRARED SYSTEMS.		0	0	0
TI171 TI-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.		0	0	0
TI172 TI-05 DO YOU OPERATE INFRARED SYSTEMS.		2	0	3
TI173 TI-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.		0	0	0
TI174 TI-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.		0	0	0
TI175 TI-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.		0	0	0
TI176 TI-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.		0	0	0
TI177 TI-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.		0	0	0

MODULE 78 - FABRICATE MULTI-CONDUCTOR AND COAXIAL CABLES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
308XD 3083D 3087DGP SPC SPC
0004 024 027

DY-19K

T1178	T1-11	00	YOU USE OR REFER TO FAR REGION.	0	0	0	0
T1179	T1-12	00	YOU USE OR REFER TO INTERMEDIATE REGION.	0	0	0	0
T1180	T1-13	00	YOU USE OR REFER TO NEAR REGION.	0	0	0	0
T1181	T1-14	00	YOU USE OR REFER TO NEAR REGION.	0	0	0	0
T1182	T1-15	00	YOU USE OR REFER TO MICRONIM.	0	0	0	0
T1183	T1-16	00	YOU USE OR REFER TO GRAY BODIES.	0	0	0	0
T1184	T1-17	00	YOU USE OR REFER TO BLACK BODIES.	0	0	0	0
T1185	T1-18	00	YOU USE OR REFER TO ABSORPTION.	0	0	0	0
T1186	T1-19	00	YOU USE OR REFER TO SCATTERING.	0	0	0	0
T1187	T1-20	00	YOU USE OR REFER TO ABSOLUTE ZERO.	0	0	0	0
T1188	T1-21	00	YOU PERFORM TASKS ON BLITZ.	0	0	0	0
T1189	T1-22	00	YOU PERFORM TASKS ON TARGET BUTTONS.	0	0	0	0
T1190	T1-23	00	YOU PERFORM TASKS ON EJECTOR LENSES.	0	0	0	0
T1191	T1-24	00	YOU PERFORM TASKS ON OCULAR LENSES.	0	0	0	0
T1192	T1-25	00	YOU PERFORM TASKS ON CONNECTION LENSES.	0	0	0	0
T1193	T1-26	00	YOU PERFORM TASKS ON FILTERS.	0	0	0	0
T1194	T1-27	00	YOU PERFORM TASKS ON SPHERICAL MIRRORS.	0	0	0	0
T1195	T2-01	00	DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS.	0	0	0	0
T1196	T2-02	00	YOU INSPECT LASERS.	0	0	0	0
T1197	T2-03	00	YOU CLEAN LASERS.	0	0	0	0
T1198	T2-04	00	YOU ADJUST OR CALIBRATE LASERS.	0	0	0	0
T1199	T2-05	00	YOU OPERATE LASERS.	0	0	0	0
T1200	T2-06	00	YOU TROUBLESHOOT WIRE CONNECTIONS OF LASERS.	0	0	0	0
T1201	T2-07	00	YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASERS.	0	0	0	0
T1202	T2-08	00	YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF LASERS.	0	0	0	0
T1203	T2-09	00	YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASERS.	0	0	0	0
T1204	T2-10	00	YOU REMOVE OR REPLACE COMPONENT PARTS OF LASERS.	0	0	0	0
T1205	T2-11	00	YOU USE OR REFER TO ANGSTROMS (A).	0	0	0	0
T1206	T2-12	00	YOU USE OR REFER TO ELECTRON ENERGY LEVELS.	0	0	0	0
T1207	T2-13	00	YOU USE OR REFER TO GROUND STATE.	0	0	0	0
T1208	T2-14	00	YOU USE OR REFER TO EXCITED STATE.	0	0	0	0
T1209	T2-15	00	YOU USE OR REFER TO PACIFY OF RADIATION.	0	0	0	0
T1210	T2-16	00	YOU USE OR REFER TO PHOTONS.	0	0	0	0
T1211	T2-17	00	YOU USE OR REFER TO SPONTANEOUS EMISSION.	0	0	0	0
T1212	T2-18	00	YOU USE OR REFER TO STIMULATED EMISSION.	0	0	0	0
T1213	T2-19	00	YOU USE OR REFER TO CONCRETE OR INCONCRETE.	0	0	0	0
T1214	T2-20	00	YOU USE OR REFER TO INVERSION LEVEL.	0	0	0	0
T1215	T2-21	00	YOU USE OR REFER TO MONOCHROMATIC.	0	0	0	0
T1216	T2-22	00	YOU WORK WITH ACTIVE MATERIALS.	0	0	0	0
T1217	T2-23	00	YOU WORK WITH PUMPING SOURCE.	0	0	0	0
T1218	T2-24	00	YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS.	0	0	0	0
T1219	T2-25	00	YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS.	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMINGOPERATIONS
308XG 30829 50870

DY-TSK

GP SPC SPC
0004 026 027

TASK	DESCRIPTION	GP	SPC	SPC
T1220	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES.	0	0	0
T1221	T2-27 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	0	0	0
T1222	T2-28 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1223	T2-29 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1224	T2-30 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1225	T2-31 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1226	T2-32 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0
T1227	T2-33 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0
T1228	T2-34 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIDE.	0	0	0
T1229	T3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE TUBES.	6	6	6
T1230	T3-02 DO YOU INSPECT DVST OR HMST.	0	0	0
T1231	T3-03 DO YOU CLEAN DVST OR HMST.	0	0	0
T1232	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR HMST.	0	0	0
T1233	T3-05 DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVST OR HMST).	2	0	0
T1234	T3-06 DO YOU TROUBLESHOOT DVST OR HMST CIRCUITS.	0	0	0
T1235	T3-07 DO YOU REMOVE OR REPLACE THE DVST OR HMST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE).	0	0	0
T1236	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVST.	0	0	0
T1237	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF HMST.	0	0	0
T1238	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS.	0	0	0
T1239	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS.	0	0	0
T1240	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0
T1241	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS.	0	0	0
T1242	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS.	0	0	0
T1243	U1-01 ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	1	22	6
U1244	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS.	5	6	6
U1245	U1-03 DO YOU USE OR REFER TO PROGRAMS.	11	22	6
U1246	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS.	6	6	6
U1247	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	0	0	0
U1248	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS.	0	0	0
U1249	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS.	8	11	6
U1250	U1-08 DO YOU USE OR REFER TO TIME-SHARING.	3	0	6

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30870

0Y-13K

GP SPC SPC
0004 026 027

U1251 U1-0V DO YOU USE OR REFER TO DATA WORDS.	8	11	8
U1252 U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.	9	11	8
U1253 U1-11 DO YOU USE OR REFER TO ADDRESS SUBADDRESS.	5	11	3
U1254 U1-12 DO YOU USE OR REFER TO STEERING INFORMATION.	0	0	0
U1255 U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.	2	6	0
U1256 U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.	0	0	0
U1257 U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.	2	6	0
U1258 U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.	9	6	11
U1259 U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.	2	6	0
U1260 U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.	0	0	0
U1261 U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.	2	3	0
U1262 U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.	6	6	6
U1263 U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.	0	0	0
U1264 U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION.	8	0	11
U1265 U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.	3	0	3
U1266 U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.	3	0	3
U1267 DUMMY QUESTION TO FACILITATE SETCHECK	0	0	0